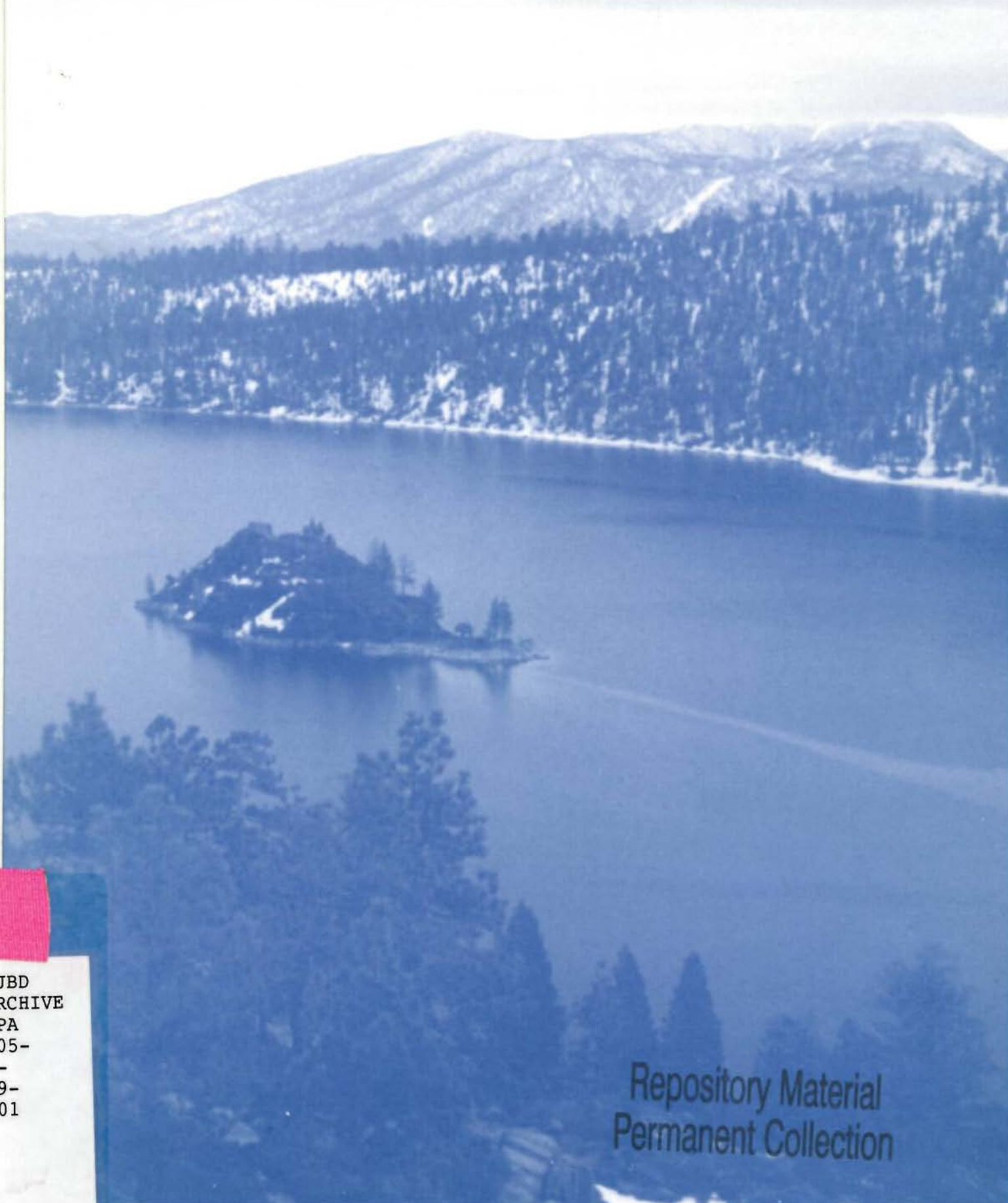




Summary Of The 2000 Budget



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Cover Photo of Lake Tahoe: Courtesy of Susan Burris

EPA Mission and Purpose

The mission of the Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment -- air, water, and land -- upon which life depends. EPA's purpose is to ensure that:

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

EPA Goals

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

- ◆ **Clean Air:** The air in every American community will be safe and healthy to breathe. In particular, children, the elderly, and people with respiratory ailments will be protected from health risks of breathing polluted air. Reducing air pollution will also protect the environment, resulting in many benefits, such as restoring life in damaged ecosystems and reducing health risks to those whose subsistence depends directly on those ecosystems.
- ◆ **Clean and Safe Water:** All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve public health, enhance water quality, reduce flooding, and provide habitat for wildlife.
- ◆ **Safe Food:** The foods Americans eat will be free from unsafe pesticide residues. Children will especially be protected from the health threats posed by pesticide residues, because they are among the most vulnerable groups in our society.
- ◆ **Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems:** Pollution prevention and risk management strategies aimed at cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this Nation.
- ◆ **Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response:** America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and to the natural environment. EPA will work to clean up previously polluted sites, restoring them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.
- ◆ **Reduction of Global and Cross-Border Environmental Risks:** The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

EPA Goals

- ◆ **Expansion of Americans' Right to Know About Their Environment:** Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it.
- ◆ **Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems:** EPA will develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.
- ◆ **A Credible Deterrent to Pollution and Greater Compliance with the Law:** EPA will ensure full compliance with laws intended to protect human health and the environment.
- ◆ **Effective Management:** EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Overview of the 2000 Budget

For nearly three decades, the Environmental Protection Agency (EPA) and its partners have made significant strides in controlling pollution and other environmental risks to human health and the environment. The air, land, and water are now safer for all Americans due to our Nation's investment in environmental protection.

The 2000 Annual Plan and Congressional Justification requests \$7.207¹ billion in discretionary budget authority, and 18,406 FTE. In addition, the President's 2000 request includes \$200.0 million in mandatory budgetary authority for Superfund orphan shares, and \$1.9 billion in bond authority for new "Better America Bonds." The 2000 budget request will help build strong, healthy communities for the 21st Century. This budget proposal is built on the principle that a healthy environment and a healthy economy go hand in hand.

Building Livable Communities through "Better America Bonds"

EPA will play a key role in implementing the "Better America Bonds" program, which is a major component of the Administration's Livability Initiative. These bonds will help state and local governments take the initiative in safeguarding their land and water for future generations. Since 1960, urban sprawl has consumed 1.5 million acres of farmland annually. This initiative will help state and local governments to preserve open space, protect water quality, and clean up abandoned industrial sites.

This initiative will provide \$9.5 billion in bond authority over five years (\$1.9 billion in 2000) for investments by state and local communities, resulting in

Federal tax credits of almost \$700 million over the next five years. These bonds will help communities preserve green space for attractive, livable communities and promote sustainable economic development. This innovative financial tool will be a model for future environmental protection by giving communities the flexibility they need to direct resources to their most pressing environmental needs.

Clean Air Partnership Fund

One of the Administration's most important public health commitments is to improve the air that Americans breathe. Over one third of Americans still live in areas where the air does not meet the new air quality standards. This budget includes \$200.0 million in new funding for a Clean Air Partnership Fund. This fund will provide new grant resources and opportunities for cities, states and tribes to partner with the private sector, the federal government and each other to provide healthy, clean air in the communities in which we live.

The Clean Air Partnership Fund will demonstrate locally managed programs that achieve early integrated reductions in soot, smog, air toxics and greenhouse gases. The Fund will direct new resources to state and local governments to find the most innovative, cost-effective and protective ways to reduce soot, smog, air toxics and green-

Overview of the 2000 Budget

house gases that contribute to climate change.

The Air Toxics program will develop tools and data that will allow the Agency to move the program from an almost exclusively technology based program to a risk-based program with a significant focus on urban air toxics. The Air Toxics program has been provided with approximately \$18 million in new funding. The recent Cumulative Exposure Project (CEP) indicates that concentrations of air toxics may be high in almost every area of the country, especially in and around urban areas. The air toxics program is geared to reduce risks for people who live and work in urban areas, that include a disproportionate number of poor and minority Americans. It will bring increased protection to a large number of sensitive populations, such as children and the elderly.

Meeting the Climate Change Challenge

Furthermore, this budget invests approximately \$216 million for EPA's portion of the Climate Change Technology Initiative (CCTI). This multi-agency program continues the Administration's commitment to address the significant threat that global warming poses to public health and the environment. This is the second year of the Administration's five-year commitment to reduce greenhouse gas emissions through partnerships with businesses, schools, state and local governments, other organizations, and investments in energy efficient technologies and tax incentives for con-

sumers who purchase energy efficient products.

Protecting Children's Health

One of the Clinton-Gore Administration's highest priorities has been, and continues to be, protecting the health of our children – giving them a healthier start in life. Children are among the most vulnerable members of society. As part of the government-wide interagency initiative on children's asthma, EPA is taking a leadership role in reducing children's exposure to asthma-causing toxins in our environment. President Clinton has provided an additional \$17 million dollars for children's asthma for education, outreach, research, and air monitoring activities. An increase of \$12 million dollars in funding is for science activities that focus on other chronic childhood afflictions and ailments, such as cancer and developmental disorders.

Ensuring Clean and Safe Water

This budget supports EPA's efforts to clean up and restore our Nation's rivers, lakes and coastal waters, as well as its restoration of watersheds across the country, with \$630 million for the Clean Water Action Plan (CWAP), a multi-Agency initiative to protect the Nation's watersheds and promote clean water, and an additional \$21 million in related funding. A key focus of the Plan is to reduce non-point source pollution, and this budget includes \$200 million for non-point source grants.

EPA's 2000 President's Budget also includes a proposal that will allow

Overview of the 2000 Budget

states greater flexibility to address their most pressing water quality problems.

The proposal will give states the option to set aside up to 20 percent of their 2000 Clean Water State Revolving Fund (CWSRF) allotment for making grants for implementation of non-point source pollution and estuary management projects. Pollution from non-point sources is now the leading cause of water pollution. These sources of pollution are harder to identify and control than those associated with point sources.

In addition, although the CWSRF shows a decrease from the previous year, the Administration is still on track to meet its goal for the CWSRF to provide an average of \$2.0 billion in annual financial assistance. A total of almost \$16 billion has already been provided to capitalize the CWSRF, almost 90 percent more than originally authorized by Congress (the program was scheduled to end in 1994).

The Administration is also on track to meet its goal for the Drinking Water State Revolving Fund (DWSRF), to provide an average of \$500 million a year, and has proposed a \$50 million increase for the DWSRF in 2000.

A \$50 million increase is provided for water and wastewater projects along the U.S./Mexico Border. With these resources, the Agency provides direct grant assistance to address the environmental and public health problems associated with untreated industrial and municipal sewage on the Border.

Empowering Citizens with Knowledge about their Environment

The Agency is committed to enabling citizens to assess the risks posed by their specific environments and allow them to make better decisions on how to handle those risks. This budget includes an investment of \$13.5 million additional dollars in the Chemical Right-to-Know Initiative, which will ensure that the public has basic health data for industrial chemicals released in their communities due to a voluntary partnership with industry. Through this and other Right-to-Know programs supported by the Agency, Americans will have unprecedented access to information. As a further step in our commitment to improving and expanding access to information, we are pioneering a new Information Office which will advocate the use and management of information as a strategic resource to enhance public health and environmental protection.

Cleaning up Toxic Waste Sites

The 2000 budget continues a commitment to clean up toxic waste sites with \$1.5 billion for Superfund cleanups, and \$200 million in mandatory spending authority for Superfund orphan shares, to reduce the effect of uncontrolled releases on local populations and sensitive environments. The Agency will continue to address clean-up efforts at over 89 percent of Superfund sites. Combined with continuing administrative reforms, these funds will help meet the President's pledge to complete the clean up of two-thirds of Superfund hazardous waste sites by 2002.

Overview of the 2000 Budget

Revitalizing Communities through the Brownfields Initiative

The 2000 budget continues the President's Brownfields initiative, which promotes local cleanup and redevelopment of industrial sites, bringing jobs to blighted areas. This budget includes \$91.7 million for technical assistance and grants to communities for site assessment and redevelopment planning, as well as revolving loan funds to finance clean-up efforts at the local level. Through 2000, EPA will have funded Brownfields site assessment pilots in 350 communities.

Strengthening Tribal Partnerships

The Agency continues its commitment to tribal programs with a total request of \$165.8 million. New funding will provide tribes with program and technical assistance and will assure that tribes have adequate information with which to make environmental decisions. In addition, the President's Budget proposes to eliminate the current statutory ceiling on grant funds that may be awarded to tribes for non-point source activities under the Clean Water Act (CWA). This is especially significant since there is increasing demand for the limited pool of tribal grant funds.

Summary

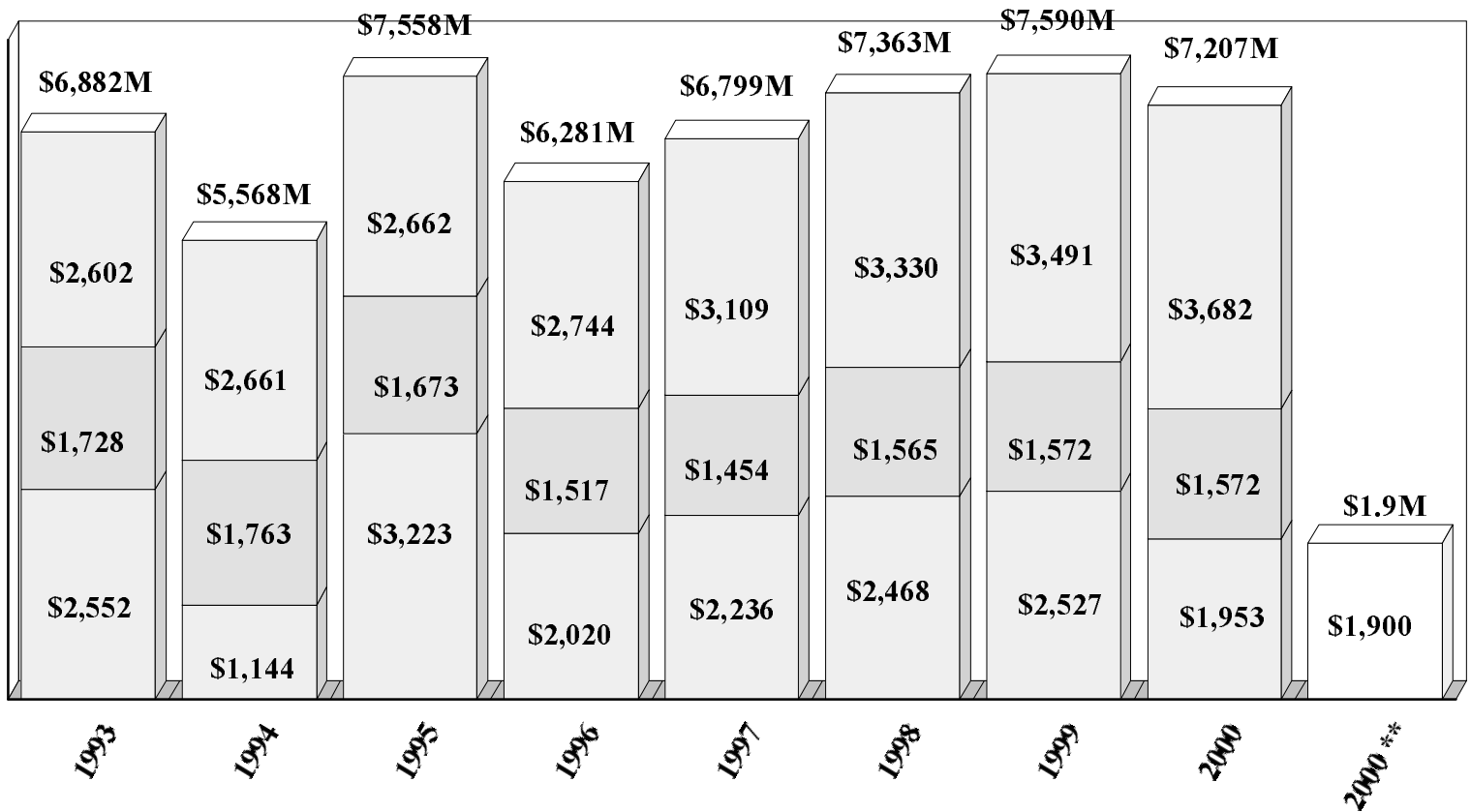
EPA's 2000 President's Budget moves our Nation forward with innovative, common sense, cost-effective programs to ensure strong and healthy communities in the 21st Century by addressing environmental problems through innovative programs and focusing on high-risk areas. The budget

continues our commitment to partnerships, good stewardship and strong leadership in the Nation's efforts for a clean, safe and healthy environment.

¹ Does not include a \$20.0 million offset for user fees.

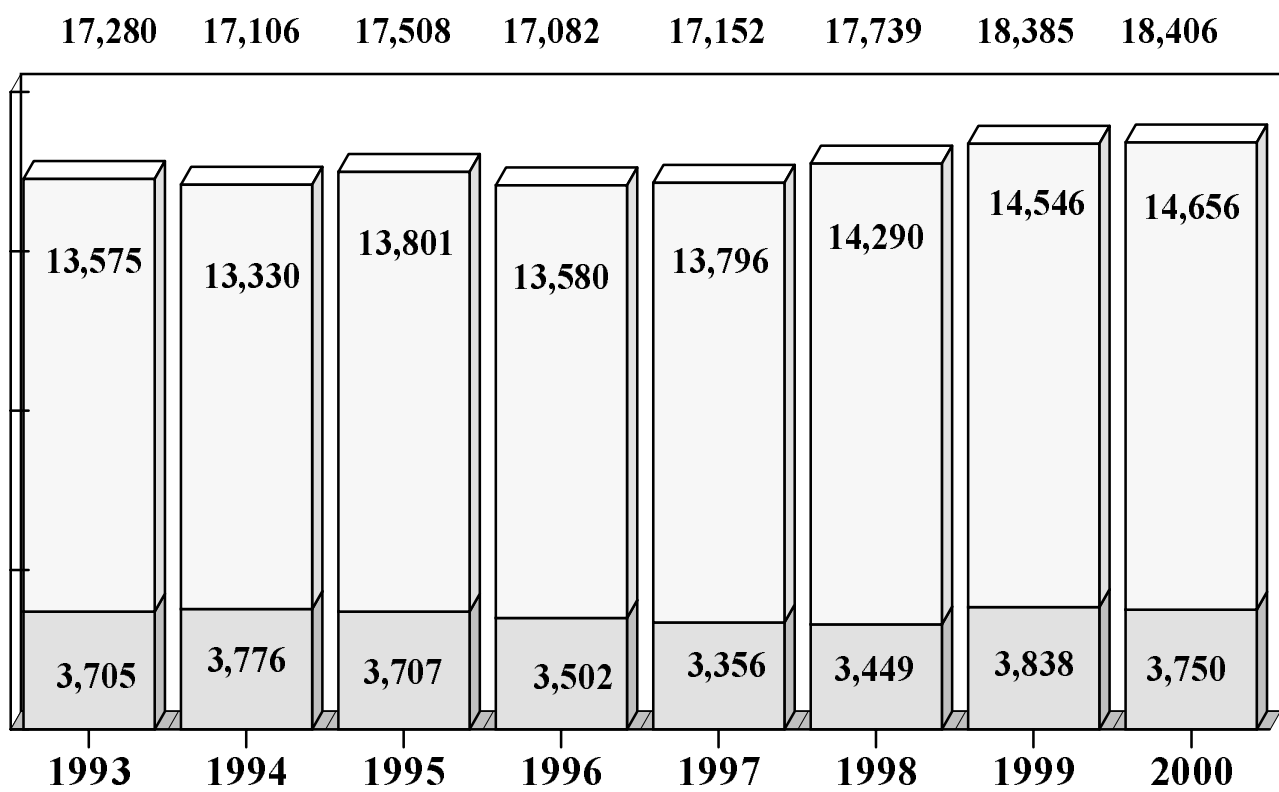
In 2000, The Agency's Budget Totals \$7.4 Billion

- Better America Bonds
- Operating Programs
- Trust Funds
- Water and Air Infrastructure



***Better America Bonds - In 2000 the Administration is proposing bond authority of \$1.9 billion.*

The Agency's Workyear Increase in 2000



NOTE: FY 1993 through 1998 reflect actual FTE usage.

GOALS

Clean Air

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 - FY 1999 Difference
Clean Air	\$536,368.0	\$722,058.8	\$185,690.8
Attain NAAQS for Ozone and PM	\$384,863.2	\$489,618.4	\$104,755.2
Reduce Emissions of Air Toxics	\$90,700.3	\$175,485.3	\$84,785.0
Attain NAAQS for CO, SO ₂ , NO ₂ , Lead	\$42,184.1	\$36,523.5	(\$5,660.6)
Acid Rain	\$18,620.4	\$20,431.6	\$1,811.2
Total Workyears:	1,762.3	1,802.6	40.3

Means and Strategy:

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

EPA is responding to air pollution because the problem is national and international in scope. The majority of the population lives in expanding urban areas, where air pollution crosses local and state lines and, in some cases,

crosses our borders with Canada and Mexico. Federal assistance and leadership are essential for developing cooperative state, local, tribal, regional, and international programs to prevent and control air pollution and for ensuring that national standards are met.

Criteria pollutants.

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

- ◆ Ground-level ozone. Causes respiratory illness, especially in active children; aggravates respiratory illnesses such as asthma; and causes

Clean Air

damage to vegetation and visibility problems.

- ◆ Carbon monoxide (CO). Interferes with the delivery of oxygen to body tissues, affecting particularly people with cardiovascular diseases.
- ◆ Sulfur dioxide (SO₂). Aggravates the symptoms of asthma and is a major contributor to acid rain.
- ◆ Nitrogen dioxide (NO₂). Irritates the lung and contributes to the formation of ground-level ozone, acidic deposition, and visibility problems.
- ◆ Lead. Causes nervous system damage, especially in children, leading to reduced intelligence.
- ◆ Particulate matter (PM). Linked to premature death in the elderly and people with cardiovascular disease and to respiratory illness in children; affects the environment through visibility impairment.

Hazardous air pollutants.

Hazardous air pollutants (HAPs), commonly referred to as air toxics or toxic air pollutants, are pollutants that cause, or may cause, adverse health effects or ecosystem damage. The Clean Air Act Amendments of 1990 list 188 pollutants or chemical groups as hazardous air pollutants and target sources emitting them for regulation. Examples of air toxics include heavy metals such as mercury and chromium, dioxins, and pesticides such as chlordane and toxaphene. HAPs are emitted from literally thousands of sources including stationary as well as mobile sources.

Adverse effects to human health and the environment due to HAPs can result from exposure to air toxics from individual facilities, exposures to mixtures of pollutants found in urban settings, or exposure to pollutants emitted from distant sources that are transported through the atmosphere over regional, national, or even global airsheds.

Compared to information for the criteria pollutants, the information about the potential health effects of HAPs (and their ambient concentrations) is relatively incomplete. Most of the information on potential health effects of these pollutants is derived from experimental animal data. Of the 188 HAPs mentioned above, almost 60 percent are classified by EPA as known, probable, or possible carcinogens. One of the more documented ecological concerns associated with toxic air pollutants is the potential for some to damage aquatic ecosystems. Deposited air pollutants can be significant contributors to overall pollutant loadings entering water bodies.

Acid rain.

The Clean Air Act Amendments of 1990 established a program to control emissions from electric power plants that cause acid rain and other environmental and public health problems. Emissions of SO₂ and nitrogen oxides (NO_x) react in the atmosphere and fall to earth as acid rain, causing acidification of lakes and streams and contributing to the damage of trees at high elevations. NO_x emissions are a major precursor of ozone, which affects public health and damages crops, forests, and materials.

Clean Air

NO_x deposition also contributes to eutrophication of coastal waters, such as the Chesapeake and Tampa Bays. Additionally, before falling to earth, SO₂ and NO_x gases form fine particles that affect public health by contributing to premature mortality, chronic bronchitis, and other respiratory problems. The fine

particles also contribute to reduced visibility in national parks and elsewhere. Acid deposition also accelerates the decay of building materials and paints and contributes to degradation of irreplaceable cultural objects such as statues and sculptures.

Percent Change in National Air Quality Concentrations and Emissions (1988-1997)

	Percent Decrease in Concentration 1988-1997	Percent Decrease in Emissions 1988-1997
Carbon Monoxide (CO)	38	25
Lead	67	44
Nitrogen Dioxide (NO ₂)	14	1 (NO _x)
Ozone (Pre-existing NAAQS) (1- hr)	19	20 (VOC)
Ozone (Revised NAAQS) (8 - hr)	16	
PM ₁₀	26	12
Sulfur Dioxide (SO ₂)	39	12

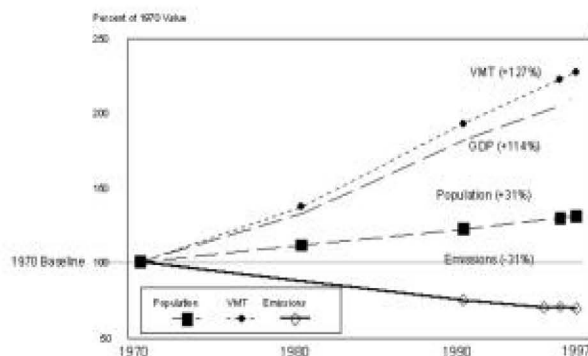
The table above summarizes the 10-year percent changes in national air quality concentrations and emissions. It shows that air quality has continued to improve during the past 10 years for all six pollutants. Nationally, air quality concentration data taken from thousands of monitoring stations across the country have continued to show improvement since the 1980's for ozone, PM, CO, NO₂, SO₂, and lead. In fact, all the years throughout the 1990s have shown better air quality than any of the years in the 1980s. This steady trend of improvement resulted despite the fact that weather

conditions in the 1990s were generally more conducive to higher pollution levels, such as ground-level ozone formation.

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

Clean Air

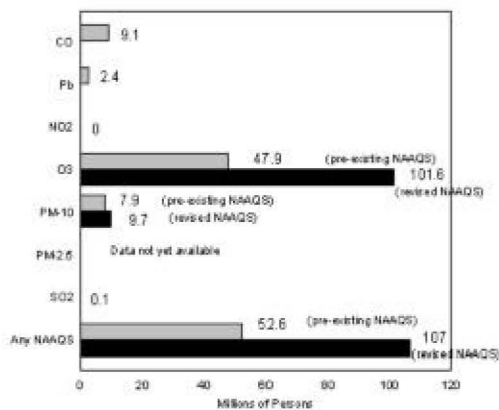
Comparison of Growth Areas and Emissions Trends



While progress has been made, it is important not to lose sight of the magnitude of the air pollution problem that still remains. Despite great progress in air quality improvement, in 1997 there were still approximately 107 million people nationwide who lived in counties with monitored air quality levels above the primary national air quality standards.

To continue to reduce air pollution, the Clean Air Act sets specific targets for the mitigation of each air pollution problem and identifies specific activities and a multi-year schedule for carrying them out. The Act also requires the air quality monitoring that helps us measure progress. In addition, the Act lays out a specific roadmap for achieving those goals - what we the Agency and our partners -- states, tribes, and local governments -- have to do to clean up the air. One constant across the titles in the Act is that the pollution control strategies and programs it contains are all designed to get the most cost-effective reductions early on. The early reductions program in toxics, Phase 1 of the Acid Rain program, and the Maximum Achievable Control Technology (MACT) program were all designed to achieve early reductions, making our air cleaner and safer to breathe. The problems that remain are some of the most difficult to solve.

Number of People Living in Counties with Air Quality Concentrations Above the Level of the NAAQS in 1997



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

We will focus our efforts on:

Clean Air

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

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

- ◆ *Maintaining accountability with flexibility* – Ensuring that there is no backsliding in the progress already made to meeting the Clean Air goal is critical. We will also use the Act's flexibility to develop innovative measures such as the NO_x trading program, which builds on the acid rain program to help states, tribes, and local governments reduce emissions at the lowest cost.
- ◆ *Fostering technical innovations where they provide clear environmental benefits* - Market-based approaches provide “niches” for many types of t

technologies; no one size will fit all. Sources can improvise, innovate, and otherwise be creative in reducing emissions. We will promote such technological innovation and then disseminate it to others to show how they can get needed reductions.

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

Research

The Agency is seeking to understand further the root causes of the air toxics environmental and human health problems in urban areas and, thereby improving the ability to weigh alternative strategies for solving those problems. Research will be devoted to the development of currently unavailable health effects and exposure information to determine risk and develop alternative strategies for maximizing risk reductions. We will be able to model and characterize not only the current toxics risk and compare national program alternatives,

Clean Air

but also identify regional and local “hot spots” and model alternative strategies to assist states and localities in solving their air and water toxics problems.

Using these strategies, we will work with areas that have the worst problems to develop strategies accounting for unique local conditions that may hinder them from reaching attainment. We will also work with states/locals and tribes to ensure that work they are doing on the PM and ozone standards effectively targets both pollutants, as well as regional haze, to maximize control strategies. On the national level, we will continue to target source characterization work, especially emission factors, that is essential for the states, tribes and locals to develop strategies to meet the standards

Highlights:

This budget request includes a new \$200 million Clean Air Partnership Fund to provide through grants an opportunity for cities, states, and tribes to partner with the private sector, the Federal government and each other to provide healthy clean air to local citizens. The Fund will demonstrate smart multi-pollutant strategies that reduce air toxics, soot and smog, as well as greenhouse gases to protect our health and climate. The Clean Air Partnership Fund will bring the most creative ideas for cleaning the air we breathe to where they are needed most -- local communities. Innovative ideas for clean air -- ideas that save money and reduce pollution -- can be demonstrated to create a cleaner, more efficient environment at the local level. The Clean Air Partnership Fund will act as a magnet for local innovation and investment.

As part of fulfilling the President’s mandate for common-sense, flexible implementation of the new PM NAAQS, OAR must provide Regions, states, and tribes with new information and tools that they need to characterize the PM_{2.5} problem and develop cost-effective solutions. Because PM_{2.5} is a newly regulated pollutant, only very limited source and emissions data are available. Development of refined characterization and emission inventory tools that relate mass and speciated monitoring data to potential emission sources will greatly enhance the information gained from the PM_{2.5} monitoring network. Also, emissions characterization will include information on the chemical composition of directly emitted particles, which is essential for developing source signatures used in relating ambient data to sources, as well as in conducting source-related health risk assessments. Initial results for this characterization effort will be used in the next periodic review of the PM_{2.5} NAAQS. Emission characterization will focus primarily on fugitive emissions from area sources, diesel emissions from mobile sources, and selected major point source categories. The characterization and activity data work will be done in conjunction with states and tribes.

EPA is also aware that in some cases individual states, tribes, and local governments cannot solve their air pollution problems merely by analysis of problems and development of solutions within their own jurisdictions. For a number of situations, upwind emissions from other jurisdictions contribute significantly to nonattainment -- or interfere with maintenance--of a NAAQS, or affect visibility. In such cases, states, tribes, and local governments will have to join together

Clean Air

in multi-jurisdictional efforts to gather and analyze data to document the degree of transport and recommend and implement strategies to reduce the transported contributions. The Ozone Transport Assessment Group, the Ozone Transport Commission, and the Grand Canyon Visibility Transport Commission are examples of such efforts. EPA has been actively involved in these efforts and intends to become involved in any similar future efforts that are needed.

Moreover, as some of these programs move into the implementation stage, EPA will provide the data system infrastructure to operate emissions trading programs. For example, EPA will operate the allowance and emissions tracking systems for the Ozone Transport Commission's NO_x trading program.

Ozone and PM Research

EPA's Tropospheric Ozone and PM Research Programs are devoted to the mission of providing an improved scientific basis for: 1) periodic review and revision of the NAAQS, as needed; and 2) implementation and attainment of the NAAQSs.

Under the Tropospheric Ozone Research Program, the Agency develops information, methods, models, and assessments to support implementation of the current ozone NAAQS and the required review of the standard every five years. Implementation-related research is coordinated through NARSTO (the North American Research Strategy for Tropospheric Ozone) to improve the scientific basis for future ozone attainment strategies through the implementation and attainment of NAAQS. The NAAQS review

efforts are closely coordinated within EPA to ensure assessment documents are produced in time to support policy decisions.

Under the PM Research Program, research focuses on areas recommended by NAS that contribute to the NAAQS review and implementation and attainment of the NAAQS. Such areas include: outdoor measures versus actual human exposures; exposure of sensitive subpopulations to PM; dosimetry; effects of PM and copollutants; susceptible subpopulations; mechanisms of injury; assessment of hazardous PM components; source-receptor measurement tools; application of methods and models; and analysis and measurement. Research will also aid in ensuring that the sites, which were initially designed to support implementation, are sufficient to meet the health and exposure research needs.

Targeting Air Toxics Risks in Urban Areas

To date, our air toxics program priority has been to reduce toxic emissions through technology-based MACT standards. Since 1990, EPA has issued 27 air standards which, when fully implemented, will reduce one million tons per year of toxic air emissions. The next step is to begin to identify and reduce the remaining risk. Our plan is to build on current technical capabilities and develop inventories, modeling capability, and an air toxics monitoring network to determine risk and measure risk reduction on a national and local scale. In addition, we plan to measure risk and determine if additional regulations are needed to address residual risk remaining after the MACT standards are promulgated.

Clean Air

In 2000, EPA will promote a new national regulatory strategy that targets the highest risk toxics in the most populated areas. The Agency will target both stationary and mobile sources as well as the interrelationships with the water and solid waste media. EPA proposes to make a very deliberate effort to use risk assessment tools to set an agenda that provides a new focus for the air toxics program. This includes setting an alternative cross-media agenda based on cumulative environmental risk. The concept of making risk-based decisions is not new to the Agency, but the technical difficulty of determining risk has restricted its use. When risk assessment is used, it is generally applied very narrowly -- for example, in setting individual standards -- but has not been used to set a broad multi-media program agenda. We believe that the science of determining risk has advanced sufficiently to enable the Agency to make much better cross-Agency decisions on how to protect public health and the environment.

Air Toxics Research

The Air Toxics Research Program will provide the effects information, as well as the exposure, source characterization, and other data, to quantify existing emissions, key pollutants, and strategies for cost effective risk management. The program will focus on the 30 most hazardous air pollutants found in urban areas. Research will focus on these areas: (1) health effects characterization and methods; (2) exposure assessment methods and models; (3) assessments and assessment methods; and (4) risk reduction and mobile emission models.

Acid Rain

The Acid Rain program will begin Phase II in the emissions reduction program

with calendar year 2000. In Phase II, the allowance allocation for the Phase I plants is to be reduced and all the remaining powerplants, with limited exceptions, are to be subjected to the allowance requirements. There will be a cap on power plant SO₂ emissions. Regional reductions of nitrogen oxide pollution from powerplants using an emissions trading approach will get to clean air faster and cheaper without imposing unfair burdens on local communities.

Other Highlights

For all NAAQS pollutants, we will continue area redesignations as they meet the standard, carry out the regular review of the NAAQS using the most current science, and ensure that areas that have clean air stay clean. For the CO, SO₂, NO₂ and lead programs, there are some states that have areas that cannot meet attainment because of some particular, source-specific problem. These sources are often high-profile and critical to the local economy. We will work cross-Agency to develop strategies that help them to comply while being sensitive to the economic and other issues.

EPA has established a permitting program, run by the states, for air emission sources to bring all the regulatory requirements of a plant into one unified operating permit document. There are also permit programs preconstruction facilities. EPA will continue to simplify and streamline the rules and guidance in implementing these programs to simplify their use by the industrial sources.

EPA is responsible for operating the Clean Air Status and Trends Network (CASTNet) dry deposition network and for providing support for operations of the National Atmospheric Deposition Program

Clean Air

(NADP) wet deposition network and for a number of visibility monitoring sites. These monitoring efforts play a crucial role in the Acid Rain Program's ongoing assessment activities, including reporting program results for GPRA and fulfilling assessment responsibilities under Title IX of the Clean Air Act and the U.S.-Canada Air Quality Agreement. In 2000, EPA will be analyzing the costs and benefits of the program for inclusion in NAPAP's 2000 Integrated Assessment Report to Congress. Assessment activities are critical to determine what environmental and public health results are being achieved as emission reductions are realized. Assessing the results of the Acid Rain Program will involve analyses over various spatial scales as well as over time to address the expected lag times for seeing ecological responses to large reductions in emissions and deposition.

2000 Annual Performance Goals

- ◆ In 2000 EPA will certify that 5 of the estimated 30 remaining nonattainment areas have achieved the one-hour National Ambient Air Quality Standards (NAAQS) for ozone.
- ◆ In 2000 Air Toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5% from 1999 (for a cumulative reduction of 30% from the 1993 level of 1.3 million tons.

Goal 1: Key Programs

	FY 1999 <u>Enacted</u>	FY 2000 President's <u>Budget</u>
Clean Air		
Acid Rain -CASTNet	\$4,000.00	\$4,000.00
Acid Rain -Program Implementation	\$9,951.30	\$12,183.30
Air Toxics Research	\$19,681.70	\$20,561.60
Air,State,Local and Tribal Assistance Grants: Other Air Grants	\$155,901.80	\$167,222.00
Clean Air Partnership Fund	\$0.00	\$200,000.00
Common Sense Initiative	\$0.00	\$635.60
EMPACT	\$2,750.40	\$2,486.50
Federal Air Toxics Standards	\$17,620.30	\$14,902.90
Mobile Sources	\$47,824.50	\$51,521.60
Particulate Matter Monitoring Network (non-grant)	\$25,000.00	\$14,613.00
Particulate Matter Monitoring Network Grants	\$50,700.00	\$42,535.00
Particulate Matter Research	\$55,656.80	\$61,855.60
Project XL	\$0.00	\$390.50
Tribal Capacity	\$3,812.70	\$3,894.90
Tropospheric Ozone Research	\$20,083.40	\$7,217.90

Clean Water

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 -FY 1999 Difference.
Clean and Safe Water	\$3,418,339.7	\$2,551,369.2	(\$866,970.5)
Safe Drinking Water, Fish and Recreational Waters	\$1,092,624.2	\$1,079,342.0	(\$13,282.2)
Conserve and Enhance Nation's Waters	\$339,236.8	\$311,444.1	(\$27,792.7)
Reduce Loadings and Air Deposition	\$1,986,478.7	\$1,160,583.1	(\$825,895.6)
Total Workyears:	2,495.1	2,522.0	26.9

Means and Strategy:

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

While the nation has made considerable progress over the past 25 years, some waters still do not meet current Clean Water Act standards. The National Water Quality Inventory 1996 Report to Congress indicates that 16 percent of assessed rivers and streams and 35 percent of assessed lake acres are not safe for fish consumption; 20 percent

of assessed rivers and streams and 25 percent of lake acres are not safe for recreational activities (e.g, swimming); and 16 percent of assessed rivers and streams and 8 percent of lake acres are not meeting drinking water uses. Many of the remaining challenges require a different approach to environmental protection because they are not amenable to traditional end-of-pipe pollution controls. These problems derive from the activities of people in general. EPA must motivate people to be responsible in their day-to-day decisions that can affect the quality of their rivers, streams, lakes, wetlands, and estuaries.

To help achieve the nation's clean and safe water goals, EPA will expand implementation of the watershed approach in carrying out its statutory authorities under the Safe Drinking Water Amendments of 1996 and the

Clean Water

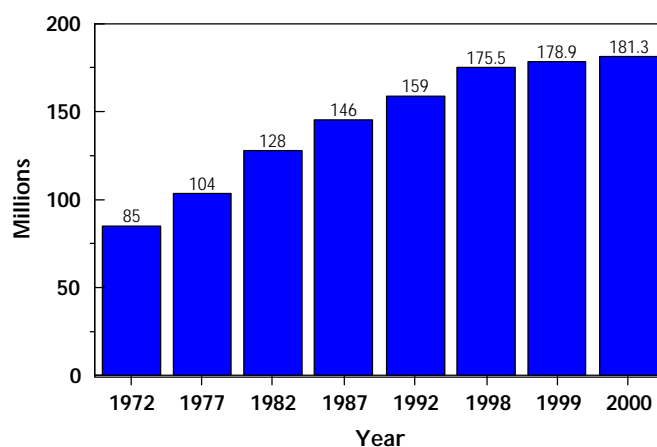
Clean Water Act. Protecting watersheds involves participation by a wide variety of stakeholders, a comprehensive assessment of the condition of the watershed, and implementation of solutions based on the assessment of conditions and stakeholder input. Full involvement of stakeholders at all levels of government, the regulated community, and the public are fundamental to the watershed approach. The watershed approach helps EPA, its federal partners, states, tribes, local governments, and other stakeholders to implement tailored solutions and maximize the benefits gained from the use of increasingly scarce resources.

EPA will continue to implement the Safe Drinking Water Act Amendments of 1996 which charted a new and challenging course for EPA, states, tribes, and water suppliers. One of the central provisions of the Amendments that remains an EPA priority is significantly strengthening the source water protection program, which builds directly on the watershed approach. Other provisions that EPA will continue to support include establishing drinking water safety standards, which place emphasis on microbiological contaminants, disinfectant and disinfection byproducts (DBPs), and other pollutants identified as posing potentially high risks; capitalizing and managing the drinking water state revolving fund (DWSRF) program to assist public water systems in meeting drinking water standards; providing assistance to small systems to build or strengthen technical, managerial, and financial capacity; establishing an operator certification program; and providing “right-to-know”

reports for all customers of public water systems.

EPA has increased its efforts to provide states and tribes tools and information to assist them in protecting their residents from health risks associated with contaminated recreational waters and noncommercially-caught fish. These tools will help reduce health risks, including risks to sensitive populations such as children and subsistence and recreational anglers. EPA activities include development of criteria, enhanced fish tissue monitoring, risk assessment, and development of fish and shellfish consumption advisories. EPA will also establish improved safety guidelines and pollution indicators so that local authorities can monitor their recreational waters in a cost-effective way and close them to public use when necessary to protect human health. For beaches, EPA’s three-part strategy is to

U.S. POPULATION SERVED BY SECONDARY TREATMENT OR BETTER



strengthen beach standards and testing, improve the scientific basis for beach assessment, and develop methods to inform the public about beach conditions.

Clean Water

Under the Clean Water Act, EPA will continue to develop scientifically-based water quality standards and criteria and work with its partners to apply them on a watershed basis. EPA will work with states and tribes to improve implementation of total maximum daily load (TMDL) programs that establish the analytical basis for watershed-based decisions on the need for additional pollution reductions where standards are not being met. EPA will continue to develop and revise national effluent guideline limitations and standards, capitalize and manage the Clean Water State Revolving Fund (CWSRF) program and other funding mechanisms, and streamline the National Pollutant Discharge Elimination System (NPDES) permit program. The Agency will continue implementing its strategy for reducing the NPDES permit backlog. The Agency, in partnership with States, will develop strategies that target permitting activities toward those facilities posing the greatest risk to the environment. This is particularly important because the NPDES program will be expanded with the completion of the phase II storm water rule, new strategy for animal feeding operations and coverage of additional wet-weather sources contributing to pollution problems. EPA will also continue reorienting all its point source programs to focus and coordinate efforts on a watershed basis.

The CWSRF is a significant financial tool for achieving clean and safe water, and for helping meet the significant needs for wastewater infrastructure over the next 20 years. With approximately \$16 billion worth of

capitalization grants (almost 90 percent, which is more than originally authorized by Congress) all 50 states and U.S. territories have benefited from this and other wastewater funding. To further support the objectives of the Clean Water Action Plan, the Agency proposes for 2000 to allow states to reserve up to an amount equal to 20 percent of their CWSRF capitalization grants to provide grants of no more than 60 percent of the costs of implementing non-point source and estuary management projects. Such grant funds may not be used for publicly-owned treatment works projects. Projects receiving grant assistance must, to the maximum extent practicable, rank highest on the State's list used to prioritize projects eligible for assistance. States may make these grants using either a portion of their capitalization grant itself, or using other funds in their state revolving fund (e.g., state match, repayments, bond proceeds). Grants may also be used with loans for eligible projects for communities which might otherwise find loans unaffordable.

EPA has stepped up efforts to engage a variety of stakeholders to reduce nutrients, pathogens, and other pollutants from nontraditional categories of point sources, including animal feeding operations, storm water drains, sanitary sewer overflows, and combined sewer overflows.

EPA is assisting states and tribes to characterize risks, rank priorities, and implement a mix of voluntary and regulatory approaches through state nonpoint source management programs. State and tribal nonpoint source pro-

Clean Water

grams are being strengthened to ensure that beneficial uses of water are achieved and maintained. States will continue to implement coastal nonpoint source programs approved by EPA and the National Oceanic and Atmospheric Administration under the Coastal Zone Act Reauthorization Amendments, and to work with the U.S. Department of Agriculture to promote implementation of Farm Bill programs consistent with state nonpoint source management needs and priorities. EPA will also provide tools to states to assess and strengthen controls on air deposition sources of nitrogen, mercury, and other toxics.

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

The President's Clean Water Action Plan, announced in February 1998, calls for more than 100 specific key actions by EPA and by many other federal agencies with either water quality responsibilities or activities that have an impact on water quality. These key actions cover most aspects of the water program at EPA. The Action Plan mobilizes federal, state, and local agencies to achieve the nation's clean water goals through the watershed approach, brings a sharp focus to the critical actions that are required, and establishes deadlines for meeting these commitments over the next several years.

Under the Clean Water Action Plan in 2000, watershed restoration action strategies will be completed in high priority watersheds across the nation that will enable local leaders to take a stronger role in setting priorities and solving water quality problems that affect the quality of life in their communities. States will finish upgrading their nonpoint source management programs to fully incorporate all nine key elements of a comprehensive solution to polluted runoff problems and coastal states will submit final plans with policies and mechanisms to reduce polluted runoff in coastal areas. EPA will work with states, tribes, municipalities, and the regulated community to ensure that the Phase II rules for the stormwater program are implemented to solve problems caused by sediment and other pollutants in our waters. EPA will also establish criteria for nutrients (i.e. nitrogen and phosphorus) so that states can start developing water quality standards for nutrients to protect waters from harmful algal blooms, dead zones, and fish kills.

Research

EPA's research efforts will continue to strengthen the scientific basis for drinking water standards through the use of improved methods and new data to better evaluate the risks associated with exposure to chemical and microbial contaminants in drinking water. To support the Safe Drinking Water Act (SDWA) and its 1996 Amendments, the Agency's drinking water research will develop dose-

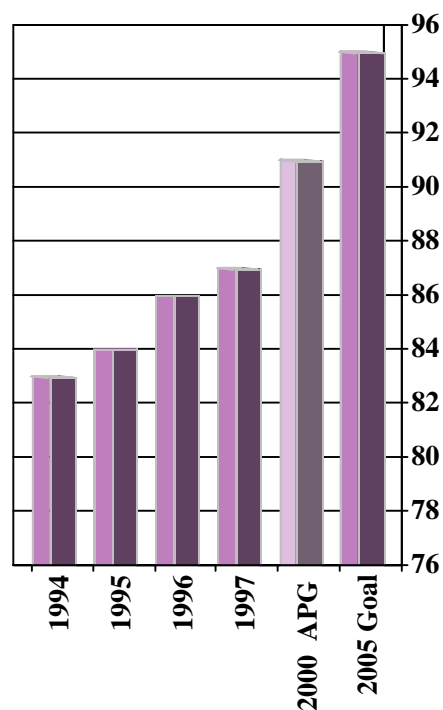
Clean Water

response information on DBPs, waterborne pathogens, arsenic and other drinking water contaminants for characterization of potential exposure risks from consuming tap water, including an increased focus on filling key data gaps and developing methods for chemicals and microbial pathogens on the Contaminant Candidate List (CCL). The Agency will develop and evaluate cost-effective treatment technologies for removing pathogens from water supplies while minimizing DBP formation, and for maintaining the quality of treated water in the distribution system and preventing the intrusion of microbial contamination.

Research to support the development of ecological criteria will improve our understanding of the structure, function and characteristics of aquatic systems, and will evaluate exposures to stressors and their effects on those systems. This research can then be used to improve risk assessment methods to develop aquatic life, habitat, and wildlife criteria. The Agency also will develop cost-effective technologies for managing contaminated sediments with an emphasis on identifying innovative in situ solutions. EPA will continue to develop diagnostic tools to evaluate the exposures to toxic constituents of wet weather flows, and develop and validate effective watershed management strategies for controlling wet weather flows, especially when they are high volume and toxic. This research will also develop effective beach evaluation tools necessary to make timely and informed decisions on beach advisories and closures.

Highlights:

Contaminated water can cause illness and even death, and exposure to contaminated drinking water poses a special risk to such populations as children, the elderly, and people with compromised immune systems. In 1994, 17 percent of those served by community water systems were supplied drinking water that violated health standards at least once during the year. In an effort to ensure that all Americans have water that is safe to drink, EPA will meet a vital milestone in 2000, by ensuring that 91 percent of the pop-



In 2000, 91 percent of the population served by community water systems will receive drinking water meeting all health based standards in effect as of 1994

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ulation served by community water systems will receive drinking water meeting all health-based standards in effect as of 1994. In establishing new contaminant protective levels, increased resources will assist states in implementing the requirements of two new health-based rules - the Stage 1 D/DBP and Interim Enhanced Surface Water Treatment Rule. EPA will also increase resources for drinking water rule-making and data collection priorities, including risk assessment and improved analytical methods, on potential contaminants identified in the 1998 Contaminant Candidate List (CCL). EPA is also using the 1998 CCL for determining drinking water research priorities in addition to establishing rule-making and data collection priorities.

In February 1998, the Administration unveiled its Clean Water Action Plan providing a comprehensive strategy for assessing and restoring the Nation's most impaired watersheds. Fundamental to the Agency's efforts to conserve and enhance the nation's waters is the management of water quality resources on a watershed basis, with the full involvement of all stakeholders including communities, individuals, businesses, state and local governments, and tribes. A key performance goal for 2000, and part of EPA's commitments under the Clean Water Action Plan, is for EPA, in conjunction with other Federal agencies, to prepare a *Watershed Restoration Progress Report*. In this report, which will be presented to the President, the nation's governors, tribal leaders, and the public will evaluate progress in implementing restoration actions and recommend any actions needed to improve progress towards

meeting clean water goals. Also in 2000, through EPA's Five Star Program, the Agency commits to cooperate and support wetland and river corridor projects in 210 watersheds, with the ultimate goal of supporting 500 watersheds by 2005.

A key element of the Agency's effort to achieve its overarching goal of clean and safe water is the reduction of pollutant discharges from point sources and nonpoint sources. The National Pollutant Discharge Elimination System (NPDES) program (which includes NPDES permits, urban wet weather, large animal feeding operation, mining, pretreatment program for non-domestic wastewater discharges into municipal sanitary sewers, and biosolids management controls), establishes controls on pollutants discharged from point sources into waters of the United States. Key annual performance goals for 2000 are to reduce industrial discharges of toxic pollutants by 4 million pounds per year, nonconventional pollutants by 1,551 million pounds per year, and conventional pollutants by 388 million pounds per year as compared to 1992 reduction levels.

States report that pollution from nonpoint sources is the largest cause of water pollution, with agriculture as a leading cause of impairment in 25 percent of the river miles surveyed. In order to restore and maintain water quality, significant loading reductions from nonpoint sources (NPS) must be achieved. Because EPA has limited direct NPS authority under the Clean Water Act, state NPS programs are critical to our overall success. To achieve reductions in loadings, it is

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essential to work with states to adopt and expeditiously implement the nine key program elements in their existing nonpoint source programs. To provide an incentive for states to upgrade their NPS programs, EPA committed in the CWAP that all states must have incorporated all nine key elements into an approved Section 319 Non-point Source Management program to receive any Section 319 funding exceeding \$100 thousand beginning in 2000. In addition, EPA will encourage states to make use of Clean Water State Revolving Funds (CWSRF) and other Federal resources to finance projects that address polluted runoff.

Research

In 2000, EPA's drinking water research will include an increased focus on filling key data gaps and developing methods for contaminants on the CCL. Research will also continue supporting the 1996 Amendments to SDWA priorities, emphasizing research on sensitive subpopulations, adverse reproductive effects of drinking water contaminants, and disinfection by-products (DBPs). Research efforts in 2000 will work towards improving methods associated with the evaluation and control of risks posed by exposure to drinking water contaminants, such as disinfection by-products, microbial contaminants, and arsenic.

Research in support of conserving and enhancing the nation's waters will work to increase understanding of landscape characteristics and ecosystem structure and function and will also reduce

uncertainty surrounding the effects of chemical, biological and physical stressors on aquatic ecosystems. This work includes developing stressor-response models for chemical contaminants, improving the ability to identify critical stressors, and predicting impacts from increased nutrient run-off that include an increase in harmful algal blooms. Under the Clean Water Act, states are required to develop designated uses for their waters. Some of this research will provide an improved biological basis for these designated uses, a longer-term direction identified by the Office of Water for improving existing water quality across the country. Some of the modeling research in this objective is related to activities in the Clean Water Action Plan.

In 2000, research efforts supporting the reduction of pollutant loadings will primarily focus on Wet Weather Flows. EPA's March 1995 Report to Congress on stormwater discharges, cited pollution from Wet Weather Flows (WWFs) as the leading cause of water-quality impairment. This degradation of water quality poses significant risks to human and ecological health through the uncontrolled release of pathogenic bacteria, protozoans and viruses as well as a number of potentially toxic, bioaccumulative contaminants. WWF research will continue to develop diagnostic tools to evaluate the exposures to toxic constituents of WWFs, and develop and validate effective watershed management strategies for controlling WWFs, especially during high volume and toxic WWFs. This research will also develop and provide effective beach evaluation tools necessary to make

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timely and informed decisions on beach advisories and closures.

2000 Annual Performance Goals:

- ◆ In 2000, reduce uncertainties and improve methods associated with the

by exposure to disinfection by-products in drinking water.

- ◆ In 2000, reduce uncertainties and improve methods associated with the evaluation and control of risks posed by exposure to microbial contaminants in drinking water.

- ◆ In 2000, 91 percent 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 percent in 1994.

- ◆ In 2000, reduce consumption of contaminated fish and exposure to contaminated recreational waters by increasing the information available to the public and decision-makers. (Supports CWAP).

- ◆ In 2000, identify the primary life support functions of surface waters that contribute to the management of sustainability of watersheds.

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

- ◆ In 2000, environmental improvement projects will be underway in 350

high priority watersheds as a result of implementing activities under the CWAP.

- ◆ In 2000, working through the Five Star Program, EPA will have co-operated on and supported wetland and river corridor projects in 210

watersheds. (Supports CWAP).

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

- ◆ In 2000, 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.

- ◆ In 2000, industrial discharges of toxic pollutants will be reduced by 4 million pounds per year (a 14 percent reduction) and conventional pollutants will be reduced by 388 million pounds per year (a 9 percent reduction) as compared to 1992 discharges when considerations for growth are considered.

- ◆ In 2000, industrial discharges of non-conventional pollutants will be reduced by 1.5 billion pounds per year (a 7 percent reduction) as compared to 1992 discharges when considerations for growth are considered.

Goal 2: Key Programs

	FY 1999	FY 2000
	<u>Enacted</u>	<u>President's Budget</u>
Clean and Safe Water		
Chesapeake Bay (CWAP)	\$19,630.10	\$18,899.30
Clean Water Action Plan: Related Research	\$0.00	\$2,068.50
Common Sense Initiative	\$0.00	\$960.90
Drinking Water Implementation	\$31,688.00	\$31,803.80
Drinking Water Regulations	\$33,886.20	\$43,484.90
Effluent Guidelines (CWAP)	\$22,365.80	\$23,193.00
EMPACT	\$1,939.90	\$476.40
Great Lakes (CWAP)	\$5,381.60	\$4,366.30
Gulf of Mexico (CWAP)	\$3,798.90	\$4,290.60
Lake Champlain (CWAP)	\$2,000.00	\$1,000.00
Long Island Sound (CWAP)	\$900.00	\$500.00
National Estuaries Program/Coastal Watersheds (CWAP)	\$16,544.30	\$17,048.80
National Nonpoint Source Program Implementation (CWAP)	\$15,476.70	\$15,198.80
NPDES Program (CWAP)	\$35,142.80	\$46,338.80
Pacific Northwest (CWAP)	\$713.60	\$823.90
Pfiesteria (CWAP)	\$2,500.00	\$500.00
Project XL	\$564.20	\$175.40
Rural Water Technical Assistance	\$13,050.00	\$688.00
Safe Drinking Water Research	\$47,728.10	\$41,468.20
Source Water Protection (CWAP Related)	\$11,685.80	\$11,501.90
South Florida/Everglades (CWAP)	\$3,099.30	\$3,084.60
State Nonpoint Source Grants (CWAP)	\$200,000.00	\$200,000.00
State Pollution Control Grants (Section 106) (CWAP)	\$115,529.30	\$115,529.30
State PWSS Grants	\$93,780.50	\$93,780.50
State Underground Injection Control Grants	\$10,500.00	\$10,500.00
State Water Quality Cooperative Agreements (CWAP)	\$19,000.00	\$19,000.00
State Wetlands Program Grants (CWAP)	\$15,000.00	\$15,000.00
UIC Program	\$11,744.70	\$11,815.90
Water Infrastructure: Alaska Native Villages	\$30,000.00	\$15,000.00
Water Infrastructure: Boston Harbor	\$50,000.00	\$0.00
Water Infrastructure: Bristol County	\$2,610.00	\$3,000.00
Water Infrastructure: Clean Water State Revolving Fund (CWSRF)	\$1,350,000.00	\$800,000.00
Water Infrastructure: Drinking Water State Revolving Fund (DWSRF)	\$775,000.00	\$825,000.00
Water Infrastructure: New Orleans	\$6,525.00	\$10,000.00
Water Quality Criteria and Standards (CWAP)	\$17,842.50	\$22,280.70
Watershed Research	\$8,376.10	\$8,478.60
Wetlands (CWAP)	\$16,110.60	\$18,124.50

Safe Food

Strategic Goal: 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.

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000–FY 1999 Difference
Safe Food	\$67,546.4	\$78,583.2	\$11,036.8
Reduce Agricultural Pesticides Risk	\$29,139.0	\$30,830.1	\$1,691.1
Reduce Use on Food of Pesticides Not Meeting Standards	\$38,407.4	\$47,753.1	\$9,345.7
 Total Workyears:	 702.4	 712.2	 9.8

Means and Strategy:

The U.S. Environmental Protection Agency (EPA) plays a major role in the lives of all Americans by ensuring that agricultural use of pesticides will not result in unsafe food. EPA accomplishes this by working to protect human health and the environment from risks associated with agricultural pesticide use, while ensuring that exposure from any individual agricultural pesticide use will not, with reasonable certainty, cause harm.

EPA regulates pesticides under two main statutes: the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food and Drug Control Act (FFDCA). FIFRA requires that pesticides be registered (licensed) by EPA before they may be sold or distributed in the United States, and that they perform their intended functions without causing unreasonable adverse effects on people or the environment when used according to EPA-approved label directions.

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

Both FIFRA and FFDCA have been amended by the Food Quality Protection Act (FQPA) of 1996, which enhances protection of children and other sensitive sub-populations. Because of EPA's work under these laws, Americans enjoy one of the safest, most abundant, and most affordable food supplies in the world.

Pesticides subject to EPA regulation include insecticides, herbicides, fungicides, rodenticides, disinfectants, plant growth regulators and other substances intended to control pests. The regulations directly affect pesticide

Safe Food

producers, formulators, distributors, retailers, commercial pest control firms, farms, farm workers, industrial and governmental users, and all households.

Pesticides are used in agriculture, greenhouses, on lawns, in swimming pools, industrial buildings, households, and in hospitals and food service establishments. Total U.S. pesticide usage in 1995 was about 4.5 billion pounds, and there are about 1.3 million certified pesticide applicators in the U.S. Herbicides are the most widely used pesticides and account for the greatest expenditure and volume. Biopesticides and other non-conventional, or safer, pesticides make up about 20 percent of the total. Agriculture accounts for over 70 percent of all applications.

Through its food safety programs, EPA enhances health and environmental protection in a number of ways, including the following:

- ◆ Establishing a single, health-based standard for pesticide residues in food, and eliminating past inconsistencies in the law which treated residues in some processed foods differently from residues in raw and other processed foods.
- ◆ Providing for a more complete assessment of potential risks, with special protections for potentially sensitive groups, such as infants and children.
- ◆ Ensuring that pesticides are periodically reassessed for consistency with current safety standards and the latest scientific and technological advances.

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

- ◆ Expediting the approval of safer, reduced risk pesticides.

Consumers are at risk for potential adverse effects from pesticide residues ingested either directly or through processed foods. Pesticides also "bioaccumulate" throughout the food chain. A critical step in protecting the public health is to evaluate food use pesticides for potential toxic effects such as birth defects, seizures, cancer, disruption of the endocrine system, changes in fertility, harmful effects to the kidneys or liver, or short term effects such as headaches or disorientation. Ensuring that any residues on food are at acceptable levels is the essence of the Safe Food goal.

The Agency works toward a twofold strategy for accomplishing the objectives of the Safe Food goal:

- ◆ EPA encourages the introduction of new, safer pesticide ingredients (including new biological agents) within the context of new pest-management practices.

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

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

Safe Food

- ◆ At the same time, the Agency systematically works toward reducing the use of currently registered pesticides with the highest potential to cause adverse health effects. FIFRA mandates Special Review, reregistration reviews and other risk-management measures available in the registration authority. FQPA mandates additional screening for aggregate exposure, common mechanisms of toxicity and an additional tenfold safety factor to ensure protection of children and infants.

In 2000, the Agency will accelerate the pace of new registrations for pesticides that offer improved prevention or risk reduction qualities compared to those currently on the market. Progressively replacing older, higher-risk pesticides is one of the most effective methods for curtailing adverse impact on health and the ecosystem while preserving food production rates.

Other priorities in 2000 include evaluating existing tolerances for currently registered pesticides to ensure they meet the FQPA health standard and to screen and require testing of certain pesticides and chemicals to evaluate their potential for disrupting endocrine systems in animals or in humans. The emphasis will be on balancing the need for pesticides, and allowing for smooth transitions to safer pesticide alternatives.

EPA uses its FIFRA registration authorities and the FFDCA mechanism in tandem to systematically manage the risks of such exposures by establishing legally permissible food-borne exposure levels, or tolerances. EPA manages the l

legal use of pesticides, up to and including the elimination of pesticides that present a danger to human health and the environment. This task involves a comprehensive review of existing pesticide use as stipulated by the reregistration provision, as well as a comprehensive reassessment and update of existing tolerances on a six-year schedule, as required by FQPA.

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

Finally, in addition to setting the requirements of continued legal use of agricultural pesticides, EPA works in partnership with USDA, FDA and the states toward the broader effort to prevent the misuse of agricultural pesticides.

More information about EPA's food safety efforts is available on the Office of Pesticides Program's website at <http://www.epa.gov/pesticides>.

Research

FQPA identifies the need for science to evaluate all potential routes and pathways of human exposure to pesticides and their effects. Research in 2000 will continue the program started in 1998 and will center on such initiatives as assessing the risk of exposures of varying frequency and duration. Research will also compare

Safe Food

the effects of pesticide exposure to mixtures of pesticides and other toxic chemicals with exposure to the individual chemicals.

Highlights

Reduce Agricultural Pesticides Risk

The Federal Food, Drug and Cosmetic Act (FFDCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) authorize EPA to set terms and conditions of pesticide registration, marketing and use. EPA will use these authorities to reduce the use of pesticides with the highest potential to cause cancer or neurotoxic effects, including those which pose particular risks to children.

New food/feed-use pesticides are registered after an extensive review and evaluation of human health and ecosystem studies and data. The Registration program includes special registration activities, tolerance setting, and permits for experimental and emergency use.

In 2000, the Agency will continue to decrease the risk the public faces from agricultural pesticides (from 1995 levels) through the regulatory review and approval of new pesticide chemicals, including reduced risk pesticides and biopesticides. The Reduced Risk Initiative, which began in 1993, expedites the registration of reduced risk pesticides. Under this strategy, EPA will continue to provide accelerated review of pesticides which meet the criteria of reduced risk, i.e., reduced levels of acute toxicity, reduced exposure to humans or

non-target organisms, and reduced environmental burden, considering comparisons with available alternative pesticides. These accelerated pesticide reviews provide an incentive for industry to develop, register, and use lower risk pesticides. Additionally, the availability of these reduced risk pesticides provide alternatives to older, potentially more harmful products currently on the market.

In addition to registering safer pesticides, EPA reviews petitions for temporary uses of pesticides to respond to emergency situations, such as a pest infestation on a crop, and exceptions for research purposes. These actions, provided for under FIFRA, include the issuance of emergency exemptions allowing the use for a limited time of a pesticide not registered for that specific purpose. Another provision addresses special local needs which allow registration of products by states for specific uses not Federally registered; experimental use permits allowing pesticide producers to test new pesticides uses outside the laboratory; amendments to previously approved pesticides (e.g., to reflect label revisions or changed formulations for products already registered); applications for new uses of a pesticide; and additional registrations for new products containing a pesticide already registered.

Reduce Use of Pesticides Not Meeting Current Standards on Food

The Food Quality Protection Act (FQPA) requires the Agency to revise its risk-assessment practices to ensure the adequate protection of children's

Safe Food

health and other vulnerable groups, and to reevaluate some 9,700 food residue tolerances approved before the passage of FQPA. To meet the tolerance reassessment requirement, the Agency will complete approximately 1,950 additional tolerance reassessments in 2000. The Agency will also screen and test these pesticides for their potential to disrupt the endocrine system.

In 2000, the Agency's Pesticide Reregistration program is now in its final phase. The Reregistration program will enable EPA to review pesticides currently on the market to ensure they meet the FQPA health standards. Pesticides found not in compliance will be eliminated or restricted in order to minimize harmful exposure. The issuance of a Reregistration Eligibility Decision (RED) summarizes the health and environmental effects findings of the chemical reregistration. The findings determine whether the products registered under this chemical are eligible for reregistration.

In 2000, EPA will complete 20 REDs and approximately 750 product reregistrations. By 2002, active ingredient and product reregistration will be complete for all pesticides subject to reregistration under FIFRA '88. By 2006, all 9,700 of the reassessments of pesticide residue tolerances mandated by FQPA will be completed.

FQPA requires that EPA establish a process for periodic review of pesticide registrations. This requires the updating of all pesticide registrations using current scientific data,

risk assessment methodology, program policies and effective risk reduction measures.

Research

To address uncertainties associated with the Agency's ability to assess risk from exposure to pesticides and other toxic chemicals, research in 2000 will continue to focus on developing new methods and models to evaluate and assess exposures to pesticides and toxic chemicals, particularly cumulative/aggregate exposures, and to evaluate and predict potential human health effects of exposures to pesticides and toxic chemicals, emphasizing cumulative exposure (e.g., multiple acute exposures, exposure to chemical mixtures, etc.). Methods will be developed for integrating effects and exposure data for use in assessing the risks associated with chemicals regulated under FQPA.

FY 2000 Annual Performance Goals

- ◆ In 2000, decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides are safe by such actions as registering 6 new chemicals, 1,800 amendments, 500 me-toos, 100 new uses, 45 inerts, 375 special registrations, 105 tolerances and 13 reduced risk chemicals/biopesticides.
- ◆ In 2000, EPA will reassess 20% of the existing 9,700 tolerances to ensure that they meet the statutory standard of "reasonable certainty of no harm," achieving a cumulative 53% assessed.

Goal 3: Key Programs

	FY 1999 <u>Enacted</u>	FY 2000 President's <u>Budget</u>
Safe Food		
Endocrine Disruptor Screening Program	\$2,581.60	\$3,734.00
Pesticide Registration	\$17,491.60	\$19,868.00
Pesticide Reregistration	\$24,971.50	\$29,125.60
Pesticide Residue Tolerance Reassessments	\$9,540.80	\$10,844.00

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

Strategic Goal: 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.

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000-FY 1999 Difference
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems	\$237,789.8	\$277,166.0	\$39,376.2
Reduce Public and Ecosystem Exposure	\$43,178.2	\$51,050.8	\$7,872.6
Reduce Lead Poisoning	\$30,817.4	\$29,213.5	(\$1,603.9)
Safe Handling and Use of Commercial Chemicals	\$42,443.2	\$56,874.1	\$14,430.9
Healthier Indoor Air	\$29,629.4	\$40,778.6	\$11,149.2
Improve Pollution Prevention Strategies, Tools	\$21,884.0	\$25,116.1	\$3,232.1
Decrease Quantity and Toxicity of Waste	\$18,852.5	\$21,026.0	\$2,173.5
Assess Conditions in Indian Country	\$50,985.1	\$53,106.9	\$2,121.8
Total Workyears:	1,124.9	1,117.9	-7.0

Means and Strategy:

The diversity and fragility of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting all Americans from the threats posed by pesticide and toxic chemicals. The underlying principle of the activities incorporated under this goal is the application of pollution prevention. Preventing pollution before it does damage to the environment is cheaper and smarter than costly cleanup and remediation, as evidenced with Superfund and PCB cleanups. Pollution prevention involves changing the

behavior of those that cause the pollution and fostering the wider use of preventive practices as a means to achieve cost effective, sustainable results.

Under this Goal, EPA ensures that pesticide use not only results in safe food, but also causes no unnecessary exposure either to human health or to natural ecosystems. In addition to the array of risk-management measures entailed in the registration authorities under FIFRA for individual pesticide ingredients, EPA has specific programs to foster worker and pesticide-user safety as well as ground-water

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

protection, and the Agency fosters the safe, effective use of antimicrobial agents. These programs work to ensure the comprehensive protection of non-target organisms and endangered species in particular, and to reduce the contribution of particular pesticides to specific ecological threats such as endocrine disruption or pollutant loading in precise geographic areas. Within this context, EPA pursues a variety of field activities at the regional, state and local levels, including the promotion of pesticide environmental stewardship programs with user groups as partners. Finally, EPA promotes the use of sensible Integrated Pest Management (IPM) and the prevention of misuse in the panoply of uses within both the urban and rural environments.

Much remains to be done to safeguard our nation's communities, homes, workplaces and ecosystems. Preventing pollution through regulatory, voluntary, and partnership actions - educating and changing the behavior of our citizens - is a sensible and effective approach to sustainable development while protecting our nation's health.

Preventing pollution through partnerships is central to the Agency's Chemical Right-to-Know initiative in 2000. This new initiative will provide the public with information on the basic health and environmental effects of the 2,800 chemicals produced at the highest volumes in the U.S. Most Americans come into daily contact with many of these chemicals, yet relatively little is known about their potential impacts. Basic hazard testing information will be the focus of a high visibility, voluntary challenge program recognizing indus-

try's contribution to the public knowledge base on these prevalent chemicals. Risks to children is a particular focus, and the Agency will supplement the information from industry with additional testing to identify and address any chemicals of special concern for children's health.

Also central to the Agency's work under this goal in 2000 will be increased attention on documenting and taking action to reduce risk from chemicals that persist, bioaccumulate or are highly toxic (PBT's) and from chemicals that have endocrine disruption effects. These chemicals have very high potentials for causing long-term damage to humans and to ecosystems. Accumulating in the food chain, often far from the source of initial exposure, and disrupting the life cycle and creation of healthy offspring, in essence these chemicals produce a multiplier effect that is difficult to halt once it is in action in the environment. Pollution prevention and controlling releases are the mainstays of protection, once these chemicals are correctly identified.

The Agency mixes both regulatory and voluntary methods to accomplish its job. For example, each year the New Chemicals program reviews and manages the risks of over 2,000 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the immediate threats of harmful chemicals, like PCBs, from entering the marketplace but it has also contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these

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

chemicals have on human health and the environment. This awareness has led industry to produce safer “greener” alternative chemicals and pesticides. Fewer harmful chemicals are entering the marketplace and our environment today because of the New Chemical Program. Through our Design for the Environment program, today’s EPA forms partnerships with industry to find sensible solutions to prevent pollution. In one example, taking a sector approach, EPA has worked with the electronics industry to reduce the use of formaldehyde and other toxic chemicals from the manufacture of printed wiring boards.

In several cases achieving the strategic objectives under this goal is a shared responsibility with other federal agencies. For example EPA’s role in reducing the levels of environmental lead exposure involves promotion of federal-state partnerships to lower specific sources of environmental lead, such as lead-based paint and other lead-content products. These partnerships emphasize public education and empowerment strategies, which fit into companion federal efforts (e.g., HHS and the Centers for Disease Control; HUD) to monitor and reduce environmental lead levels. Likewise, the results of EPA’s efforts to reduce indoor air exposures are measured by public-health agencies. EPA focuses on specific agents (e.g., radon), on general categories of indoor facilities (schools, homes and workplaces), and on the characteristic risks presented in each category.

Intrinsic to the effort to prevent pollution is the minimization of the

quantities of waste generated by industry, municipalities and hazardous-waste management operations. Strategies range from fostering recycling and other resource-recovery processes to broad-based campaigns to re-engineer the consumption and use of raw materials or personal conservation of resources.

Since this Goal focuses on how Americans live in communities, it features the particular commitment of promoting environmental protection in Indian country, as consistent with our trust relationship with tribes, and is cognizant of the nation’s interest in conserving the cultural uses of natural resources.

Research

The human health and ecosystems research included in this objective is designed to provide direct support to EPA’s regulatory program for pesticides and toxic substances. The information developed from application of human health research will significantly increase understanding of the impacts of specific pesticides and toxic substances on human health. Ecosystems research will help EPA develop the evaluative effects methods that are used in the regulation of toxic substances, including pesticides, in ecosystems. Test methods developed through this research program are incorporated in the existing compendium of test methods used to support Agency regulatory requirements.

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

Highlights:

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

Reduce Public and Ecosystem Exposure to Pesticides

Reducing risk from exposure to pesticides requires a multi-faceted approach. Beyond being exposed through the food we eat, the general public, applicators, and farm workers may be exposed through direct handling, groundwater contamination or aerial spray. One intent of the Food Quality Protection Act (FQPA) is to protect the public by shifting the nation toward safer pesticide use. At the same time, appropriate transition strategies are important to the nation as well, to avoid disruption of food supply or sudden changes in the market that could result from abrupt termination before well targeted safer equivalents can be identified and made available. For these reasons, the Strategic Agricultural Partnership initiative is an important priority in 2000. The Strategic Agricultural Partnership will assist in developing alternative pest management tools and effective implementation approaches. The Agency will work closely with industry, agricultural

pesticide users and other stakeholders to develop an effective transition to the safer pesticides required by the FQPA.

In 2000, EPA will continue increasing agricultural workers' awareness and knowledge of pesticides and worker safety through the Certification and Training (C&T) and Worker Protection (WP) programs. EPA will continue to protect the nation's ecosystems and reduce impacts to endangered species through Pesticide Environmental Stewardship Program (PESP), and integrated pest management (IPM). The Agency will emphasize efforts with our tribal partners to address pesticide issues and enhance the development of tribal technical capacity, particularly in the areas of risk management, worker safety, training, and pollution prevention.

Together, the WP and the C&T programs address the problem of direct exposure. These programs safeguard workers from occupational exposure to pesticides by providing training for agricultural workers, employers, pesticide applicators and pesticide applicators and handlers. Training and certification of applicators of restricted use pesticides further ensures that workers and other vulnerable groups are protected from undue pesticide exposure and risk. The Groundwater Strategy, a cooperative efforts with states and Regions to develop Pesticide Management Plans (PMPs), will further efforts to prevent pesticide pollution of this vital resource. The Endangered Species program will enlist the support of the agricultural community and other interested groups to protect wildlife and critical habitats from pesticides. This

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voluntary program is carried out through communications and outreach efforts and in coordination with other federal agencies. PESP and IPM play pivotal roles in moving the nation to the use of safer methods of pest control, including reduced risk pesticides. These closely related programs promote risk reduction through collaborative efforts with stakeholders to utilize safer alternatives to traditional chemical methods of pest control.

Antimicrobial sterilants and disinfectants are used to kill microorganisms on surfaces and objects in hospitals, schools, restaurants and homes. Antimicrobials require appropriate labeling and handling to ensure safety and efficacy. EPA will remain focused on concerns regarding product labeling and product efficacy and on meeting other requirements for antimicrobial sterilants set forth by FQPA.

Pesticide issues also affect our tribal partners. The Agency will emphasize efforts to address pesticide issues and enhance the development of tribal technical capacity, particularly in the areas of risk management, worker safety, training, and pollution prevention.

Reduce Lead Poisoning

During 2000, EPA will implement the Lead Certification and Training Program for lead-based paint professionals. Most States choose to establish their own programs, however, in an estimated 15 to 20 states the Agency will directly implement Lead Certification and Training. EPA will

also promulgate two major lead rules, the debris and lead hazard standards rules. Lead-based paint is the primary source of lead-poisoning in children in the U.S. today. EPA contributes to solving this environmental problem primarily by assisting in, and in some cases guiding, federal activities aimed at reducing the exposure to children in homes with lead-based paint.

EPA has promulgated regulations to set up a federal infrastructure, including the lead assessment and abatement training and accreditation rule for targeted housing, and the lead real estate notification and disclosure rule (with HUD and HHS). In 2000 the Agency will promulgate final rules on disposal of lead-based paint debris and establishment of standards regarding hazardous levels of lead in paint, dust and soil. EPA will also develop 3 proposals, setting standards for training and certification for lead-based paint abatement activities in public and commercial buildings, bridges, and superstructures, and reconversion and remodeling. These activities will make significant contributions to the objective of reducing the blood lead levels of our nation's most vulnerable children.

Safe Handling and Use of Commercial Chemicals and Microorganisms

Under TSCA, EPA identifies and controls unreasonable risks associated with chemicals. In 1999, the Vice-President has called on EPA to launch the Chemical Right-to-Know Initiative, addressing a critical gap in the nation's knowledge about the health and environmental hazards of high production volume chemicals. The

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initiative will work with industry to put information about those chemicals into the hands of the public, communities, environmental groups, States and the Regions as quickly as possible, as well as take action to mitigate the risks identified during these efforts.

Another priority is working to implement the recommendations of the Endocrine Disrupter Screening and Testing Advisory Committee (EDSTAC), which provides advice and counsel to the Agency on a strategy to screen and test chemicals and pesticides that may cause endocrine disruption in humans, fish, and wildlife. EPA must implement the strategy by August 1999 and report to Congress by August 2000.

In 1999, EPA will begin the validation of an EDSTAC recommended screening test protocol and will complete it in 2000. EPA then will begin testing chemicals in commerce for endocrine disrupting potential. It is expected that by 2005 all high production volume chemicals will have been screened for endocrine disrupting potential and the resulting priority chemicals will have been tested or testing initiated, using the approach and test methods developed from recommendations of the EDSTAC.

In 2000, EPA will also continue efforts in four important program areas, including: existing chemicals; new chemicals; national program chemicals (including lead, fibers, dioxin, and PCB's); and the endocrine disruptor testing program. The Agency reviews chemicals already in commerce, along with chemicals or microorganisms before commercialization (i.e., "new" chemicals) to determine whether they

can be handled and used safely. Another focus is identifying opportunities for increasing the introduction and use of safer or "greener" chemicals.

For those chemicals whose significant risks are well established (such as PCBs, asbestos, and dioxin), reductions in use and releases are important to reducing exposure of the general population and also of sensitive sub-populations. EPA's PCB control efforts will shift from enforcing PCB use standards toward encouraging phase-out of PCB electrical equipment, ensuring proper waste disposal methods and capacity, and fostering PCB site cleanups. An Agency-wide dioxin strategy will respond to the latest science and address dioxin risk management in a more comprehensive cross-media approach. EPA is also continuing work on its Dioxin Exposure Initiative which focuses on identifying and quantifying the link between dioxin sources and the general population exposure.

EPA's research program will support this effort by generating scientific information used in improving the test methods used to generate the data. Research seeks to improve our understanding of both the risks to human health and adverse ecological effects. To the extent that this research supports testing guidelines that relate to both toxic substances in general and to pesticides, research under this objective additionally supports EPA's goal to reduce the risks to the nation's food supply and the non-dietary pesticide risks posed to human health and the environment.

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Achieving Healthier Indoor Air

The Indoor Environments program will work on the education and outreach activities which implement portions of AAsthma and the Environment: An Action Plan to Protect Children,® the draft Inter-agency Plan being developed under the President's Task Force On Environmental Health Risks and Safety Risks to Children. All of the activities proposed for 2000 fall within Recommendations 2 and 4 of the inter-agency action plan. Recommendation 2 calls for the implementation of public health programs that improve the use of scientific knowledge to prevent and reduce the severity of asthma symptoms in children by reducing environmental exposures. Recommendation 4 calls for implementation of programs designed to eliminate the disproportionate impact on minorities and those living in poverty. EPA's proposed activities will be conducted with close collaboration among EPA offices, as well as with the Centers for Disease Control (CDC), and the National Institutes of Health institutes to ensure that the activities complement those being conducted by the Department of Health and Human Services. In support of the President's Task Force on Environmental Health Risks and Safety Risks to Children, the Agency will conduct a pilot program to expand air pollution monitoring in up to two communities downwind of industrialized urban centers to better understand the relationship between air pollution and childhood asthma. Asthma highlights include:

Asthma Management In and Through Schools

EPA will expand the implementation of its highly successful indoor air quality ATools for Schools,® an indoor air quality management plan for schools, to several thousand more schools by developing and implementing an incentive/recognition program. The Agency also will substantially increase implementation of the AOpen Airways® asthma management program to reach several thousand more elementary schools and expand the AA is for Asthma® program for pre-school children to 89 locations.

Increased Community Action

EPA will work with housing groups, home health educators, community groups, and building operators to design and conduct pilots to substantially reduce indoor environmental triggers for asthma in low-income housing. The Agency also will convene five state-wide urban environmental asthma summits, and a National Environmental Asthma Caucus for practitioners, researchers, industry, and government to identify the most effective ways to target and educate the public about environmental triggers of asthma. For the first time, EPA will provide funding to local communities through established programs to work with doctors, health clinics, and civic groups to reduce children's exposure to environmental tobacco smoke (ETS), a significant indoor environmental asthma trigger.

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Working with Managed Care to Get Asthma Reduction

EPA will conduct economic analyses to identify areas to provide economic incentives for managed care/health care organizations to help reduce asthma attacks through patient education about indoor environmental triggers. Incentives for health care providers to incorporate education into their patient contacts could include fewer doctor and urgent care visits, lowered medication costs, etc. EPA will join with other Federal agencies to convene a cabinet level summit with managed care CEO's to solicit their help in addressing asthma prevention by integrating strong messages about indoor environmental triggers into health education programs.

Significantly Expand Multi-media Campaigns

EPA will significantly expand to several waves, national multi-media campaigns on asthma and ETS. The asthma campaign would be targeted to children and urban residents, who need to be educated about the indoor environmental triggers of asthma. The ETS campaigns will target parents of small children, counseling them not expose children to smoke inside the home. Research indicates that multiple messages are needed before the public will act.

Improve Pollution Prevention Strategies, Tools

Pollution prevention (P2) is designed to prevent contaminants from entering the environment. To support that principle, current EPA strategies are to institutionalize preventive approaches in EPA's regulatory, operating, and compliance/ enforcement programs and facilitate the adoption of pollution prevention techniques by states, tribes and industry. EPA is encouraging the use of market incentives, environmental management tools and new technologies to promote wider adoption of P2 measures. Perhaps the fastest growing opportunity for incorporating P2 into basic business practices lie in private sector partnerships, which enable EPA's knowledge of P2 principles and techniques to be combined with industry-specific expertise in production and process. These approaches provide assistance and incentives to various sectors of society (e.g., manufacturers, product and service suppliers, governments, consumers) to promote behavioral change that is sustainable and beneficial to the environment. These activities promote greater ecological efficiency and therefore help to reduce the generation and release of production-related waste.

The Agency's **Pollution Prevention Program** can be described in five parts:

1. A guiding social principle to promote source reduction as the core environmental ethic of society – through education
2. Sustainable business practices to incorporate P2 approaches and techniques as an essential part of how successful businesses operate – through programs like Energy Star, WasteWise and Environmental Accounting.
3. Core government actions, including EPA, other Federal and State regulatory programs, grants reinvention, and enforcement activities.
4. Cleaner technologies and processes to help companies continuously improve quality, competitiveness and environmental stewardship – through partnerships like the Design for the Environment.
5. Safer products to ensure consumer and environmental protection – through activities like the Consumer Labeling Initiative and Environmentally Preferable Products.

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

Decrease the Quantity and Toxicity of Waste

The Agency's work encompasses many activities to decrease waste that include reducing toxic chemicals in industrial hazardous waste streams, reducing the generation of municipal, hazardous and other solid waste, and recycling hazardous and municipal solid waste.

Reducing toxic chemicals in industrial waste streams will result in more efficient use of natural resources, and decrease human exposure to toxic wastes. The Agency will further develop partnerships with industry to minimize hazardous wastes by building on the tools and coordination activities that were put in place in 1998 and 1999. The RCRA program is focusing reduction efforts on the most persistent, bioaccumulative and toxic chemicals in hazardous waste which is consistent with the national and international priority on reducing the presence of persistent, bioaccumulative and toxic chemicals (PBTs) in the environment.

As part of the national leadership to reduce the amount of waste generated, and to improve the recovery and conservation of materials through source reduction and recycling, RCRA recycling and source reduction projects will continue to move beyond the basics in 2000. These efforts include promoting financing and technology opportunities for recycling/reuse businesses and working with partners to identify, analyze and share information on waste reduction opportunities for construction and demolition debris, food wastes and other targeted waste streams.

The Agency will also continue working to reduce the barriers to safe recycling of hazardous waste, through changes to the definition of solid waste, through provisions in other regulatory standards and through ongoing outreach to stakeholders to explore additional options. In 2000, the Agency will initiate the hazardous waste recycling strategy. Options being considered for the strategy include outreach and rulemakings that will reduce burden on industry while ensuring safer recycling, including some regulations stemming from the Agency's Common Sense Initiatives (CSI).

Assess Conditions in Indian Country

EPA places particular priority on working with Federally recognized Indian tribes on a government-to-government basis to improve environmental conditions in Indian country in a manner that affirms the vital trust responsibility that EPA has with the 554 tribal governments. The Agency will concentrate on building Tribal infrastructure and completing a documented baseline assessment of environmental conditions in Indian Country to enable EPA/Tribes to identify high priority human health and environmental risks. These assessments will provide a blueprint for planning future activities through the development of Tribal/EPA Environmental Agreements (TEAs) or other similar tribal environmental plans to address and support priority environmental multimedia concerns in Indian Country. EPA will support innovative approaches for implementation of tribal programs and funding flexibility through participation

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in Performance Partnership Grants (PPGs).

2000 Annual Performance Goals:

- ◆ In 2000, protect homes, communities, and workplaces from harmful exposure to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction of 5%, or 20% cumulative (from 1994 levels) in the number of incidences of pesticide poisonings reported nationwide.
- ◆ In 2000, administer federal programs and oversee state implementation of programs for lead-based paint abatement certification and training in 50 states, to reduce exposure to lead-based paint and ensure significant decreases in children's blood lead levels by 2005.
- ◆ In 2000, provide methods and models to evaluate the impact of environmental stressors on human health and ecological endpoints for use in guidelines, assessments, and strategies.
- ◆ In 2000, ensure that of the up to 1800 new chemicals and microorganisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.
- ◆ In 2000, 890,000 additional people will be living in healthier residential indoor environments.
- ◆ In 2000, 2,580,000 students, faculty and staff will experience improved indoor air quality in their schools.
- ◆ In 2000, the quantity of Toxic Release Inventory (TRI) pollutants released, treated or combusted for energy recovery, will be reduced by 200 million pounds, or 2%, from 1999 reporting levels.
- ◆ In 2000, divert an additional 1% (for a cumulative total of 29% or 64 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.3 pounds per day.
- ◆ In 2000, 20% of Tribal environmental baseline information will be collected and 20 additional tribes (cumulative total of 65) will have tribal/EPA environmental agreements or identified environmental priorities.

Goal 4: Key Programs

	FY 1999 <u>Enacted</u>	FY 2000 President's <u>Budget</u>
Preventing Pollution		
Agricultural Worker Protection	\$4,365.20	\$5,738.10
Common Sense Initiative	\$1,063.40	\$979.60
Design for the Environment	\$4,554.00	\$3,886.10
Endocrine Disruptor Screening Program	\$1,525.20	\$3,934.90
Existing Chemical Data, Screening, Testing and Management	\$12,870.00	\$23,045.60
Grants to States for Lead Risk Reduction	\$13,712.20	\$13,712.20
Indoor Air Research	\$2,836.10	\$0.00
Indoor Environments : Asthma	\$1,135.50	\$12,323.70
Indoor Environments: Schools	\$2,921.00	\$9,946.70
Indoor Environments: ETS	\$1,050.00	\$2,194.30
Lead Risk Reduction Program	\$16,911.30	\$14,986.30
National Program chemicals: PCBs, Asbestos, Fibers, and Dioxin	\$3,011.90	\$3,289.20
New Chemical Review	\$13,409.60	\$13,926.90
Pesticide Applicator Certification and Training	\$5,313.60	\$6,765.60
Pesticide Registration	\$7,451.40	\$10,365.00
Pesticide Reregistration	\$4,856.00	\$4,865.70
Pesticides Program Implementation Grant	\$13,114.60	\$13,114.60
Pollution Prevention Incentive Grants to States	\$5,999.50	\$5,999.50
Pollution Prevention Program	\$8,872.30	\$9,581.20
RCRA State Grants	\$3,073.00	\$3,073.00
Recycling	\$4,980.80	\$5,079.30
Source Reduction	\$2,728.80	\$3,073.40
State Radon Grants	\$8,158.00	\$8,158.00
Tribal Capacity	\$0.00	\$300.00
Tribal General Assistance Grants	\$42,585.40	\$42,585.40
Waste Minimization	\$2,195.30	\$2,943.20

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

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 - FY 1999 Difference
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response	\$1,655,913.5	\$1,656,719.5	\$806.0
Reduce or Control Risks to Human Health	\$1,491,141.1	\$1,477,134.1	(\$14,007.0)
Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies	\$164,772.4	\$179,585.4	\$14,813.0
Total Workyears:	4,316.9	4,246.1	-70.8

Means and Strategy

Improper waste management and disposal threatens the health of people, endangers wildlife, and harms vegetation and natural resources. Uncontrolled hazardous and toxic substances, including radioactive waste, often migrate to ground water, surface water, and air. Consequently, they affect streams, lakes, rivers, and water supplies. Toxins bioaccumulate in fish or accumulate in sediments. In 2000, EPA will promote safe waste storage, treatment, and disposal, clean up active and inactive waste disposal sites, and prevent the creation of new waste sites.

A principal objective of this goal is to reduce or control the risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. In partnership with states, tribal

governments, the public, and other stakeholders, EPA will reduce or control the risks to human health and the environment at thousands of Superfund, Brownfield, Resource Conservation and Recovery Act (RCRA), and Underground Storage Tank (UST) sites. To achieve this goal, EPA strives to apply the fastest, most effective waste management and cleanup methods available, while involving affected communities in the decision making process. Effective use of research and enforcement strategies will also allow the Agency to further reduce the risks from exposures to hazardous waste.

Another principal objective of this goal is to prevent, reduce, prepare for, and respond to releases, spills, accidents or emergencies. Through the UST, RCRA, Chemical Preparedness and Prevention, and Oil programs, the Agency and its partners manage the

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

practices of thousands of facilities to prevent dangerous releases to the environment. When releases do occur, EPA and its partners will have the capabilities to successfully respond.

Research

Research efforts will continue to focus on ground water and soils research, which seeks to understand the process that governs contaminant transport and fate to improve remediation and monitoring technologies, especially their cost-effectiveness.

The principle areas of concentration are exposure to soil and ground water contaminants, assessment of the risks posed by these contaminants, cost-effective management of these risks, and the development of innovative technologies to characterize and remediate contaminated sites. Work will also continue under active waste management and combustion facilities. Through the development of new and improved methods and models to assess exposure and effects, this research will provide the fundamental science and modeling backbone needed to conduct truly multimedia, multipathway exposure modeling and risk assessment.

Highlights

In 2000, actions taken to clean up Superfund sites will reduce the effect of uncontrolled releases on local populations and sensitive environments. EPA will complete construction at 85 Superfund sites and will take action to address contamination at 300 sites using removal authorities. EPA will also

obtain commitments from Potentially Responsible Parties (PRPs) to start new construction at National Priorities List (NPL) sites.

The direction and emphasis of the Superfund program in 2000 is to build on past successes and maintain the pace of site cleanups. Administrative reforms will continue to provide benefits, which include savings in the cost and duration of Superfund actions. Additionally, Administrative reforms have improved the program's effectiveness and enabled the Agency to accomplish the following as of September 30, 1998:

- ◆ **Over 89%** of Superfund's sites (1,228 of 1,370) on the NPL are either undergoing cleanup construction (remedial or removal) or are completed.
- ◆ **585** Superfund sites have had all cleanup construction completed (41% of sites on the NPL).
- ◆ Approximately **5,500** removal actions have been taken at hazardous waste sites to immediately reduce the threat to public health and the environment.
- ◆ Nearly **31,000** sites have been removed from the CERCLIS waste site list to help promote the economic redevelopment of these properties.

To accomplish Superfund's objectives, EPA works with states, Indian Tribes, and other Federal

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agencies to protect human health and the environment and to restore sites to uses appropriate for the nearby communities. The Agency also provides outreach and education to the surrounding communities to improve their direct involvement in every phase of the cleanup process and understanding of potential site risks.

One of Superfund's major program goals is to have potentially responsible parties pay for and conduct cleanups at abandoned or uncontrolled hazardous waste sites. The Superfund enforcement program maximizes PRP participation and is committed to reforms, which increase fairness, reduce transactions costs and promote economic redevelopment. The Agency also seeks to recover costs associated with site cleanup from responsible parties when trust fund monies have been expended

Brownfields are abandoned, idled, or under-used industrial and commercial properties which are not Superfund NPL sites. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. Concerns about environmental liability and cleanup, infrastructure declines, and changing development priorities have worsened the situation.

As with the Superfund program, the Brownfields Initiative has a coordinated federal approach to assist our partners in better addressing environmental site assessment and cleanup. In 2000, the Agency will fund 50 additional assessment demonstration pilots and supplement 50 existing assessment pilots to communities. These

pilots provide EPA, States, local governments, and Federally recognized Tribes with useful information and new strategies for promoting a unified approach to environmental site assessment and characterization, and redevelopment. Beginning in 2000, the Agency will provide funding to states for Brownfields site assessment activities and to facilitate communication between Brownfields pilots and State environmental authorities. To further enhance a community's capacity to respond to Brownfields redevelopment, the Agency will also make 70 awards to capitalize Brownfields Cleanup Revolving Loan Fund Pilots (BCRLF) to communities completing their Brown-fields Site Assessment Demonstration Pilot activities. EPA will fund 10 job training pilots for community residents and will provide \$3.0 million to NIEHS to support minority worker training and augment the communities' capacities to cleanup Brownfields sites. In addition, EPA will continue to explore connections between RCRA low-priority corrective action efforts and cleanup of Brownfields properties.

In 2000, the RCRA Corrective Action program will actively implement the RCRA Cleanup Initiative. This initiative targets active sites and is aimed at reforming the current RCRA Corrective Action Program. The impetus of the RCRA Cleanup Initiative is to remove barriers that would prevent the Agency from achieving its GPRA Objective of reducing risk to human health and the environment. The RCRA Cleanup Initiative has identified several projects that are intended to: 1) reduce impediments to achieving the Agency's

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objective; 2) enhance State and stakeholder involvement and; 3) promote innovative approaches to cleanup actions. It incorporates several longer term efforts to enhance the program into a more comprehensive, focused approach.

In 2000, the RCRA hazardous waste permits program will have permits or other approved controls in place for 146 additional RCRA hazardous waste management facilities for a cumulative total of 3,380 facilities. These efforts will minimize the threat of exposure to hazardous substances because the RCRA program's comprehensive framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste. To ensure that these controls are more effective and efficient, the Agency will streamline its permit process for implementors and for the regulated community.

The Agency has also developed a strategy to address hazardous waste combustion facilities. Phase I of the Maximum Achievable Control Technology (MACT) standards under the Clean Air Act, which will revise standards for incinerators and cement and lightweight aggregate kilns that burn hazardous waste will be finalized in 1999. Thus, as the MACT standards are implemented by 2003, the Agency will reduce the emissions of dioxins, furans, and particulate matter from these sources. These efforts will further reduce the indirect exposure (primarily through the food chain) to hazardous constituents in emissions, especially to children.

The Agency has several efforts to better address risk in the RCRA Pro-

gram. The proposed Hazardous Waste Identification Rule seeks to regulate lower risk wastes, such as those that have already undergone treatment, under alternative state non-hazardous waste regulation programs. The Air Characteristics Study will be enhanced in 2000 to better answer the question whether some industrial wastes should be classified as hazardous because of risks posed by their air emissions. In 2000, as part of the Agency's Air Toxics Initiative, the RCRA program will explore the need for regulatory changes to focus on these risks from wastewater treatment tanks, surface impoundments, and landfills. The Agency is working to improve test methods under its Toxic Constituent Leaching Procedure (TCLP) to better evaluate waste leaching potential for assessing whether a waste should be classified as hazardous, how effective a treatment is, and whether land disposal is an appropriate method for managing particular wastes.

In 2000, the Agency will work toward completing and implementing, with states and industry, voluntary guidelines for industrial non-hazardous waste management. These voluntary guidelines address a range of issues including groundwater contamination, air emissions, and alternatives to waste disposal. Although the states implement the municipal solid waste (MSW) landfills regulatory programs, the Agency establishes minimum national standards for state compliance. The Agency also reviews and approves state MSW landfill permit programs. Furthermore, the Agency will continue working with states to ensure that an additional 141 facilities for a cumulative of 2,600 out of 3,536 RCRA municipal

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solid waste facilities have approved controls in place to prevent dangerous releases to air, soil, groundwater, and surface water. These activities will provide a uniform application of minimal safe management standards to help ensure that sufficient controls are in place.

The Agency conducts scientific research to support its programs. Under the RCRA program, the Agency will conduct scientific research on active hazardous waste management and combustion facilities to ensure that our regulatory approach will continue to be successful in the future. The Agency seeks innovative methods for stabilizing and solidifying toxic constituents in waste streams thereby reducing their dispersion on the public and the environment.

The Agency's highest priorities in the Underground Storage Tank (UST) program are to (1) promote and enforce compliance with regulatory requirements aimed at preventing and detecting UST releases, thereby reducing releases to the environment and (2) to address the backlog of 168,000 cleanups of Leaking Underground Storage Tanks (LUST). The Agency anticipates additional releases will be discovered as owners and operators comply with the December 1998 requirements for upgrading, replacing, or closing USTs. In 2000, the Agency anticipates that 21,000 LUST cleanups will be completed under the supervision of EPA and its state, local, and tribal partners and that approximately 90% of USTs will be in compliance with the December 22, 1998 requirements.

Reducing chemical accidents is vital to ensure that communities are not exposed to hazardous materials. The Agency continues its efforts to help states and Local Emergency Planning Committees (LEPCs) implement the Risk Management Program (RMP). EPA has made steady progress in this area and in 2000, with additional resources, will delegate the RMP to four additional states for a cumulative total of 13. To assist in reaching this goal, EPA will provide technical assistance grants, as well as technical support outreach and training to help both states and LEPCs develop their accident prevention capabilities. Through these activities, States, local communities and individuals will be better prepared to prevent and prepare for chemical accidents.

Every day oil spills pose risks to human health, the environment and the economy. EPA's Oil Spill program responds to and monitors oil spills that occur in the waters of the United States and adjoining shorelines. Approximately 20,000 oil spills are reported annually. Over the past three years, EPA has received and evaluated 35,000 oil spill notifications, served as lead responder at 275 oil spills, and shared responsibility with other parties at 475 responses. To prevent spills to the greatest extent practicable, the Agency will take preventive measures by ensuring that 400 additional oil storage facilities are in compliance with the Spill Control and Countermeasures (SPCC) regulations. In addition, the Agency will improve the quality and quantity of data provided in Area Contingency Plans, especially concerning environmentally sensitive and

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economically important areas. By working with state and local governments and industry, EPA's Area Planning activities ensure effective and immediate cleanup of oil spills.

In the event of a terrorist act where there is a threat to human health or the environment, the Agency is prepared to respond. The Agency has begun to prepare and educate other organizations such as our Federal partners, and state and local planners about the National Response System and the National Domestic Preparedness Program for terrorist events. In 2000, the Agency will provide anti-terrorism training to 19 of the most vulnerable communities.

Research

In 2000, the Agency will continue to focus its research efforts in the exposure, risk assessment, and remediation areas of waste research. Developing field analytical methods for characterizing groundwater and soils, producing ecological soil screening values for common soil contaminants, and researching innovative uses of abiotic treatment technologies continue to be pivotal areas of focus in the Agency's effort to support the assessment and remediation of sites with contaminated soil and groundwater.

Research in support of multimedia science for the Hazardous Waste Identification Rule (HWIR) will continue in 2000. The intent of these efforts is to develop a systems approach to modeling and data management. Such an approach will facilitate scientifically credible assessments of

multimedia-based human and ecological exposure to chemical stressors. Combustion research will provide the technical basis to determine risks and set operational monitoring and controls for individual combustion facilities.

2000 Annual Performance Goals:

- ◆ In 2000, 170 (for a cumulative total of 408 or 24%) of high priority RCRA facilities will have human exposures controlled and 170 (for a cumulative total of 289 or 17%) of high priority RCRA facilities will have groundwater releases controlled.
- ◆ In 2000, complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 246,000 cleanups since 1987.
- ◆ In 2000, EPA will fund Brownfields site assessments in 50 more communities, thus reaching 350 communities by the end of 2000.
- ◆ In 2000, EPA will complete 85 Superfund cleanups (construction completions), continuing on a path to reach 925 completed cleanups by the end of 2002.
- ◆ In 2000, enhance scientifically-defensible decisions for site cleanup by providing targeted research & technical support.
- ◆ In 2000, ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a

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statute of limitations on total past costs equal to or greater than \$200,000.

- ◆ In 2000, maximize all aspects of PRP participation., including 70% of the work conducted on new construction starts at non-Federal Facility sites on the NPL, and emphasize fairness in the settlement process. Result is timely and protective clean up of the Nation's worst contaminated sites and other significant threats to public health.
- ◆ In 2000, ensure compliance with Federal facility statutes and CERCLA Agreements and ensure completion of current NPL CERCLA IAGs.
- ◆ In 2000, 146 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for a total of 65 percent of 3,380 facilities.
- ◆ In 2000, 400 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations (for a cumulative of 890 facilities since 1997).
- ◆ In 2000, 90% of USTs will be in compliance with the December 22, 1998, requirements, which improves upon the estimated 65 percent as of the December 22, 1998 deadline.

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

Goal 5: Key Programs

	FY 1999 <u>Enacted</u>	FY 2000 President's <u>Budget</u>
Waste Management		
Assessments	\$87,738.80	\$88,970.30
ATSDR Superfund Support	\$76,000.00	\$64,000.00
Brownfields	\$91,538.90	\$91,667.50
Civil Enforcement	\$1,234.00	\$1,334.70
Common Sense Initiative	\$265.60	\$95.50
Community Right to Know (Title III)	\$4,683.50	\$5,099.40
Compliance Assistance and Centers	\$274.80	\$342.70
EMPACT	\$398.40	\$440.20
Federal Facilities	\$28,641.60	\$28,720.40
Federal Preparedness	\$11,060.20	\$11,060.20
Hazardous Substance Research: Hazardous Substance Research Centers	\$1,067.20	\$1,092.50
Hazardous Substance Research: Superfund Innovative Technology Evaluation (SITE)	\$7,663.10	\$7,114.60
Hazardous Waste Research	\$6,619.30	\$7,249.60
Leaking Underground Storage Tanks (LUST) Cooperative Agreements	\$58,990.00	\$57,750.00
NIEHS Superfund Support	\$60,000.00	\$48,526.70
Oil Spills Preparedness, Prevention and Response	\$11,988.00	\$12,437.50
Other Federal Agency Superfund Support	\$10,000.00	\$11,035.00
Project XL	\$112.60	\$114.30
RCRA Corrective Action	\$18,167.40	\$22,755.50
RCRA Permitting	\$15,388.60	\$16,773.00
RCRA State Grants	\$52,302.50	\$52,302.50
Risk Management Plans	\$7,258.30	\$11,804.60
Superfund - Cost Recovery	\$30,494.10	\$30,494.10
Superfund - Justice Support	\$29,000.00	\$28,663.50
Superfund - Maximize PRP Involvement (including reforms)	\$89,109.20	\$89,234.50
Superfund Remedial Actions	\$588,190.00	\$592,842.50
Superfund Removal Actions	\$199,419.10	\$207,399.90
Underground Storage Tanks (UST)	\$6,077.90	\$6,345.30
UST State Grants	\$10,544.70	\$11,944.70
Waste Combustion	\$7,346.70	\$7,297.70

Reduction of Global and Cross-Border Environmental Risks

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 FY 1999 Difference
Reduction of Global and Cross-border Environmental Risks	\$229,366.9	\$407,414.2	\$178,047.3
Reduce Transboundary Threats: Shared North American Ecosystems	\$71,025.9	\$119,987.5	\$48,961.6
Climate Change	\$127,968.9	\$242,765.0	\$114,796.1
Stratospheric Ozone Depletion	\$17,033.8	\$27,046.5	\$10,012.7
Protect Public Health and Ecosystems From Persistent Toxics	\$4,125.8	\$6,943.1	\$2,817.3
Achieve Cleaner and More Cost-Effective Practices	\$9,212.5	\$10,672.1	\$1,459.6
Total Workyears:	522.4	519.9	-2.5

Means and Strategy

Pollutants are oblivious to geographic and political boundaries, and their propensity to migrate threatens human health and the environment, demanding coordinated international action. The United States addresses global environmental problems, such as climate change and stratospheric ozone depletion, through bilateral and multilateral consultations and agreements. Other problems are not global but cross borders, such as between the US and Mexico, and between the US and Canada. In the Great Lakes, and in our marine and Arctic environments, EPA uses a geographic approach to direct environmental action.

EPA will use a variety of approaches to prevent harm to the global environment and ecosystems including:

- 1) forming bilateral and multilateral environmental agreements, environmental foreign policy initiatives, and regional and global negotiations;
- 2) cooperating with other countries to ensure that domestic and international environmental laws, policies, and priorities are recognized and implemented;
- 3) working with other Federal agencies, states, business, and environmental groups to promote the flow of environmentally sustainable technologies and services worldwide; facilitating cooperative research and development programs; and international technical assistance, training and information exchange; and
- 4) promoting public/private partnership programs to reduce greenhouse gas emissions.

Reduction of Global and Cross-Border Environmental Risks

Greenhouse gases, for example, are produced by burning coal, oil, and natural gas to heat our homes, power our cars, and illuminate our cities. Deforestation and land clearing also contribute to the production of greenhouse gases. These gases may have several environmental effects: raising atmospheric and ocean temperatures, ultimately changing weather patterns; increasing evaporation, drying soil and increasing drought; increasing precipitation and its intensity, causing floods; increasing incidences of heat waves; and raising sea levels.

Possible adverse consequences for human health include: increasing numbers of deaths associated with heat waves; increasing incidence of allergic disorders; and increasing diseases that thrive in warmer climates, such as malaria, yellow fever, dengue fever, encephalitis, and cholera. Since the early 1990s, EPA has been building partnerships with businesses in all sectors of the economy in order to meet the 1990 Framework Convention on Climate Change (FCCC) objective to stabilize greenhouse gases emissions at 1990 levels. EPA also plays a major role in the President's Climate Change Technology Initiative (CCTI), launched in October, 1997, and included in the 1999 Budget.

Research

EPA's research and assessment activities will evaluate the potential consequences of global change and climate variability in the United States. These assessments will focus on evaluating the impacts of global change on human health, ecosystems, and

economic systems at regional, state, and local scales. Among the impacts the agency will examine are the spread of vector-borne and water-borne disease, changes in landscape cover and the migration of plant and animal species, and changes in farm productivity and food distribution. These research and assessment activities are an integral part of the U.S. National Assessment Process of the U.S. Global Change Research Program

Highlights

EPA's continued leadership is necessary to build the international cooperation and technical capacity that are essential to prevent harm to the global environment and ecosystems that we share with other nations. In 2000, EPA will use a variety of approaches to prevent harm to the global environment and ecosystems.

Recognizing that no single country can resolve the problem of global climate change, EPA will help facilitate the international cooperation necessary to achieve the stabilization of greenhouse gas concentrations. The 1992 Framework Convention on Climate Change (FCCC) set the objective of stabilizing greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system. On the domestic side, EPA will encourage voluntary partnerships, provide technical assistance and promote State and local efforts to achieve future greenhouse gas emission reductions. Administration-wide, the programs launched in the 1993 Climate Change Action Plan have the potential to reduce U.S. greenhouse gas

Reduction of Global and Cross-Border Environmental Risks

emissions by over 160 million metric tons of carbon equivalent (MMTCE) annually by the year 2010.

The Agency will contribute to the science underpinning U.S. policy, including the assessment of consequences of climate change and climate variability. Particular attention will be paid to the potential beneficial and detrimental consequences of climate variability and change for human health, ecosystems, and economic systems at the regional, state and local levels. EPA will play a major part in peer-reviewed economic and policy analyses that serve U.S. policy-makers and international negotiators.

To protect the earth's stratospheric ozone layer, EPA will continue to regulate ozone-depleting compounds and foster the development and use of alternative chemicals in the U.S. and abroad.

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

Reduced risks from toxics, especially persistent organic pollutants and selected metals that circulate in the environment at global and regional

scales, will be achieved by working with the Department of State and other countries to control the production and use or phaseout of targeted chemicals. EPA is also working to reach agreement on import and export requirements applicable to certain chemicals, an expansion of pollutant release and transfer registers and the harmonization of chemical testing, assessment and labeling procedures. The goal of international harmonization of test guidelines is to reduce the burden on chemical companies of repeated testing in satisfying the regulatory requirements of different jurisdictions both within the United States and internationally. Harmonization also expands the universe of toxic chemicals for which needed testing information is available, and fosters efficiency in international information exchange and mutual international acceptance of chemical test data. For test guideline harmonization, EPA will continue to cooperate closely with other Federal agencies and the Organization for Economic Cooperation and Development (OECD) in harmonizing testing guidelines.

Internationally, the Agency will oversee the implementation of the global POPs convention and continue our efforts in reducing the use of leaded gasoline globally. Working with Canada, we are moving to reduce sulphur dioxide and nitrogen oxide emissions that cause acid rain, and protect shared ecosystems along our northern border. EPA will assess and report on the state of key Great Lakes ecosystem components, provide current status and trend information and coordinate measurement of environmental indicators applicable to the entire

Reduction of Global and Cross-Border Environmental Risks

Great Lakes Basin. Through open lake and nearshore sediments monitoring, and the joint Great Lakes National Program Office (GLNPO) Canadian integrated atmospheric deposition network reports will be issued on, or developed for, the 15 GLNPO "Monitoring Indices."

The U.S. is working with other OECD member countries to implement the International Screening Information Data Set (SIDS) program, a voluntary international cooperative testing program started in 1990. The program's focus is on developing base-level test information (including data on basic chemistry, environmental fate, environmental effects and health effects) for international high production volume chemicals. SIDS data will be used to screen chemicals and to set priorities for further testing and/or assessment. The Agency will review testing needs for 50 SIDS chemicals in 2000.

To reduce environmental and human health risks along the U.S./Mexico Border, EPA is working with the border states and Mexico in a multi-media approach targeted at air and water quality and hazardous waste management and disposal. Nine working groups will address key issues working closely with state and local agencies on both sides of the border. EPA will also support the financing and construction of wastewater treatment and solid waste facilities.

The Agency will focus attention on concern for children exposure to environmental tobacco smoke. The focus of the Agency's international program is to improve the protection of

children's health from environmental threats by: prioritizing the research needs identified, seeking to allocate research among countries and international organizations, agreeing on timelines, and developing international reporting mechanisms. In addition, EPA is focusing on those Sub-Saharan Africa countries and specific sectors (i.e., refineries, mining companies, and stockpilers of agricultural chemicals) in those countries which are major contributors to globally circulating chemical/toxic risks, focusing on pesticides, mercury and lead.

Research

Research and assessment activities will examine the potential consequences of climate change for human health and ecosystems in three regions in the United States: the Mid-Atlantic, the Gulf of Mexico, and the Great Lakes regions. EPA will assess the possibility of changes in disease patterns due to changing climate, the impact of heat stress on populations, especially the elderly and children, and the socioeconomic consequences of extreme weather events, such as hurricanes, floods, and droughts. Researchers will also analyze the impact of climate change and variation on the ability of ecosystems to provide services that many of us rely on but often take for granted, such as water filtration and air purification. The outcome of these assessments will help inform decision making regarding strategies to address possible changes and variations in climate.

Reduction of Global and Cross-Border Environmental Risks

FY 2000 Annual Performance Goals:

- ◆ In 2000, 9 additional water/waste water projects along the Mexican border will be certified for design-construction for a cumulative total of 34 projects.
- ◆ In 2000, assess and report on the state of key Great Lakes ecosystem components, report current status and trend information to Great Lakes environmental managers, and coordinate measurement of SOLEC environmental indicators applicable to the entire Great Lakes Basin.
- ◆ In 2000, assess the consequences of global change and climate variability at a regional scale.
- ◆ In 2000, greenhouse gas emissions will be reduced from projected levels by more than 50 million metric ton carbon equivalent per year through EPA partnerships with businesses, schools, State and local governments, and other organizations. Reduction level will increase 10 million metric tons over 1999.
- ◆ In 2000, reduce energy consumption from projected levels by more than 60 billion kilowatt hours, resulting in over \$8 billion in energy savings to consumers and businesses that participate in EPA's climate change programs. Increase of 15 billion kilowatt hours & \$5 million in annual energy savings over 1999.
- ◆ In 2000, demonstrate technology for a 70 mpg mid-size family sedan that has low emissions and is safe, practical, and affordable.
- ◆ In 2000, restrict domestic consumption of class II HCFCs below 208,400 metric tonnes (MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 130,000 MTs.
- ◆ In 2000, successfully conclude international negotiations on a global convention on Persistent Organic Pollutants (POPs) reaching agreement on POPs selection criteria, technical assistance, and risk management commitments on specified POPs.
- ◆ In 2000, deliver 30 international training modules; implement 6 technical assistance/ technology dissemination projects; implement 5 cooperative policy development project; & disseminate info products on US environmental technologies and techniques to 2500 foreign customers.

Goal 6: Key Programs

	FY 1999	FY 2000
	<u>Enacted</u>	<u>President's</u>
		<u>Budget</u>
Global and Cross Border		
CCTI: Research	\$10,000.00	\$0.00
Climate Change Research	\$16,670.50	\$22,833.60
Climate Change Technology Initiative: Buildings	\$38,800.00	\$80,100.00
Climate Change Technology Initiative: Carbon Removal	\$0.00	\$3,400.00
Climate Change Technology Initiative: Industry	\$18,600.00	\$55,600.00
Climate Change Technology Initiative: State and Local	\$2,900.00	\$5,000.00
Climate Change Program		
Climate Change Technology Initiative: Transportation	\$31,750.00	\$61,900.00
EMPACT	\$671.40	\$385.10
Environment and Trade	\$4,514.60	\$4,236.80
Global Toxics	\$932.30	\$2,967.00
Great Lakes National Program Office (CWAP)	\$14,614.60	\$13,367.50
International Capacity Building	\$7,400.00	\$10,400.00
Multilateral Fund	\$11,362.00	\$21,000.00
Partnership with Industrial and Other Countries	\$6,176.40	\$8,234.00
U.S. - Mexico Border	\$4,929.40	\$5,056.30
Water Infrastructure:Mexico Border	\$50,000.00	\$100,000.00

Expansion of Americans' Right-to Know About Their Environment

Strategic Goal: 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.

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000-FY 1999 Difference.
Expansion of Americans' Right to Know About their Environment	\$133,467.2	\$144,599.1	\$11,131.9
Increase Quality/Quantity of Education, Outreach, Data Availability	\$67,818.5	\$77,487.5	\$9,669.0
Improve Public's Ability to Reduce Exposure	\$42,247.7	\$41,230.8	(\$1,016.9)
Enhance Ability to Protect Public Health	\$23,401.0	\$25,880.8	\$2,479.8
Total Workyears:	720.8	754.3	33.5

Means and Strategy

Providing all Americans with access to sound environmental information and involving the public in our work are essential parts of a comprehensive approach to protecting the environment. This goal is premised on the concept that all U.S. citizens have a "right-to-know" about the pollutants in their environment, including land, air and water pollution as well as potential health effects of the chemicals used in the food they consume and everyday products they purchase. This premise is especially important to minority, low-income, and Native American communities that suffer a disproportionate share of health effects from poor environmental conditions. Access to environmental information enables American citizens to make informed

decisions about their local environment. It also leads to creative and sustainable solutions to environmental risks, as well as opportunities for preventing pollution. The Agency believes all U.S. citizens have the right to knowledge and representation in public policy and environmental decision-making.

The purpose of this goal is to empower the American public with information, enabling them to make informed decisions regarding environmental issues in their communities. EPA will expand environmental education, outreach and data availability. EPA will also expand the range of data it collects and improve the quality and usability of the data. The Agency will also ensure the data are widely available through the Internet, mass media and other sources.

Expansion of Americans' Right-to Know About Their Environment

The right-to-know is fundamental to EPA's mission and the effective management of our data is an important aspect of measuring our progress in protecting the American people and the environment from toxic substances and pollution. The Agency has accelerated its efforts to improve the accuracy of its data, and to reduce the burdens to industry associated with reporting. Also the Agency is working to enhance the coordination of data collection activities with states and to improve our data collection methods and use the latest technologies to consolidate information on a single Internet site.

The Agency is working to redesign its internal structure to better meet the information demands of the 21st century. EPA's new vision and approach to information management will involve the creation of a single program manager and office responsible for information management, policy and information technology stewardship across the Agency. This office would be responsible for developing and implementing information standards and accountability systems that will improve environmental information within the Agency and the information provided to the public. This office would oversee data collection, assure data quality, and make sure that data are appropriate for intended uses. The office would also work toward reducing information collection and reporting burden; filling significant data gaps; and providing integrated environmental and public health information and statistics to the public.

Research

The President's Environmental Monitoring for Public Access and Community Tracking (EMPACT) program will continue research to provide the public with information regarding local environmental conditions (e.g. toxic pollutants, water and air quality). EMPACT will provide at least 75 of the nation's largest metropolitan areas with access to information regarding the quality of their local environments, and relevant scientific and technical tools to interpret and evaluate potential impacts and risks to these environments. Citizen involvement in protecting the environment will also be expanded through the Integrated Risk Information System (IRIS). IRIS is a database of consensus health information on environmental contaminants and is used extensively by EPA Program Offices and Regions where consistent, reliable toxicity information is needed for credible risk assessments.

Highlights

The increasing easy availability of public access to electronic media offers unprecedented opportunities for EPA to provide citizens with the information necessary to effect substantial environmental improvements. In support of this objective and the President's "Right-to-Know" goals, EPA will continue to increase the amount and quality of publicly available information on environmental programs. EPA also realizes that while it is important to provide up-to-date, accurate information, it must also ensure the public finds the information useful. The Agency collects data in a variety of systems, on a

Expansion of Americans' Right-to Know About Their Environment

variety of environmental pollutants that impact land, air, water as well as data on potential health effects of chemicals in food and manufactured products. EPA is aggressively seeking to integrate all relevant sources of data and information to enhance user-friendliness for the non-technical user and to support comprehensive approaches to environmental protection.

In partnership with states, the Agency will pursue efforts to expand publicly available information. This includes the One-Stop Reporting initiative, the Reinventing Environmental Information (REI) initiative, and the Envirofacts database. The Center for Environmental Information and Statistics (CEIS) will serve as the Agency's point of internal focus and convenient point of external public access for integrated, multimedia information. Data integration will be promoted through such projects in 2000 as Integrated Data for Enforcement Analysis (IDEA) and the Sector Facility Indexing Project (SFIP) and Environmental Monitoring for Public Access and Community Tracking (EMPACT).

The Agency-wide Enhanced Public Access Project will make all significant Agency guidance and policy statements electronically accessible along with site-specific interpretations of the regulated entities' environmental management practices. In 2000, 90 percent of Agency policy and guidance documents will be available via the Internet to regions, states, industry, and the public. EPA will also work to develop and improve existing tools to identify communities most dispropor-

tionately affected by toxic releases and hazards. The Agency will focus on collaboration and coordination of efforts to address environmental justice issues within EPA and with other Federal agencies.

The Agency is working to ensure that small business (and other small entities, such as communities and non-profit organizations) have easy access to information and may participate appropriately in regulatory activities that affect them. EPA is seeking as well to reduce paperwork burden on small business. The Agency's Small Business Advocacy Chair has moved aggressively to implement not only the letter, but the spirit of the Small Business Regulatory Enforcement Fairness Act (SBREFA); the Agency has completed 13 Small Business Advocacy Panels to date, which have noticeably reduced potential burdens on small entities. The Agency's Small Business Ombudsman serves as EPA's focal point for small business outreach and information; it also conducts oversight and reports annually to Congress on state assistance to small businesses under Section 507 of the Clean Air Act.

In 2000, EPA will continue to coordinate with the National Advisory Council on Environmental Policy and Technology (NACEPT) and its standing committees to identify and foster new environmental technologies. Other activities include facilitating and monitoring the Agency's response to NACEPT recommendations that are accepted by the Administrator, and managing statutorily-mandated advisory committees dealing with North American Free Trade Agreement

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(NAFTA) implementation and U.S./ Mexico border issues. The advisory committees are: the National Advisory Committee/ Governmental Advisory Committee and the Good Neighbor Environmental Board.

The Agency will implement the Electronic Data Interchange for Discharge Monitoring Reports (DMR) which will allow National Pollutant Discharge Elimination Systems (NPDES) permittees to submit monitoring data electronically to EPA, rather than filing quarterly paper reports. As part of the Agency's integration efforts, drinking water systems will provide customers an annual consumer confidence report that contains information about the quality and source(s) of their drinking water beginning in 2000. EPA's watershed-related electronic outreach efforts, including Surf Your Watershed and the Index of Watershed Indicators, will directly support efforts to implement the President's "Right-to-Know" goal by providing up-to-date, accurate pictures of the conditions and stressors.

Under the Emergency Planning and Community Right-To-Know Act (EPCRA), EPA is committed to expanding environmental release information gathered under the Toxic Release Inventory (TRI) by increasing the chemicals covered and expanding the industrial sectors required to report. Examples include: adding to the TRI reporting list approximately 40 chemicals deferred from earlier rulemakings, assessing the need to include additional industrial sectors, and evaluating the need for more in-depth chemical use data. In 2000, EPA also will process 110,000 facility reports and

issue the TRI Public Data Release for reporting year 1998. EPA will continue to expand the use of the Internet for delivering this information and we are making information available by zip code, and facility. Over time, there has been a significant decrease in the amount of toxic materials released into the environment, according to TRI reporting by facilities.

The Pesticides program emphasizes effective public outreach as well as extensive interaction with stakeholders to ensure that the information provided keeps pace with the latest scientific developments. Public access tools are selected for convenience to a broad audience - industry, farmers and agricultural workers, and the public at large. Websites, databases and risk modeling programs are available along with brochures, fact sheets, public meetings and training sessions, and information hotlines.

To help communities identify information needs and devise methods to collect environmental data, EPA is developing and piloting risk-based screening tools to help communities understand environmental data. These tools will be pilot-tested and then disseminated to other communities across the nation, enhancing the public's ability to address the areas of greatest concern for their communities. To help the public have adequate access to timely and credible risk assessment information, EPA will apply new and upgraded technology that will incorporate a systematic approach to automated sampling, real-time analysis and communication of environmental

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data, and provide timely, reliable and consistent environmental information in a meaningful format that is easily accessible by the public.

As a guiding principle, EMPACT will strive to break new ground in the use of updated technology solutions as well as communication of environmental information that the public needs to know as part of their day-to-day decision-making. EPA will coordinate EMPACT activities among federal, state, Tribal, and local governments as well as stakeholders, such as community health officials, businesses, industries, schools and environmental organizations. The Integrated Risk Information System (IRIS) supports EPA's community-based environmental research which is used extensively by EPA Program Offices and Regions where consistent, reliable toxicity information is needed for credible risk assessments. Guidance and support will be provided to risk assessors through the provision of risk assessment guidelines, expert consultation and support, and risk assessment training.

Currently in development is a state-of-the-art scientific information system that will facilitate communication and increase efficiency to do research among Agency staff and stakeholder partners. It will be accessible on public world wide networks. Use of web-enabled technology will provide agency scientists and professionals easy access for retrieval, analysis and archival of data and documentation to support human health and environmental research using a standard desktop Internet browser. The system will improve scientists' operations, reduce research costs and facilitate new

analyses as teams of scientists will be able to integrate research data. By 2000, the system will be compatible with the National Spatial Data Infrastructure (NSDI) services.

Efforts to allow better integration with our state and local partners will continue, including support to the Local Government Advisory Committee and the Small Town Advisory Subcommittee. In addition, EPA will design and manage meetings and conference calls and work with states and state associations to ensure that state concerns are considered in Agency policies, guidance, and regulations.

Finally, EPA will provide technical assistance to both Headquarters and Regional program office personnel to ensure that small, minority and women-owned businesses receive a "fair share" of Agency procurement dollars. This "fair share" may be received either directly or indirectly through EPA grants, contracts, cooperative agreements, or interagency agreements. Pursuant to P.L. No. 102-389, the Agency has a national goal of 8% utilization of minority and women-owned businesses in the total value of Agency procurements and financial assistance agreements. This activity will enhance the ability of small, minority and women-owned businesses to participate in the Agency's objective to protect public health.

2000 Annual Performance Goals:

- ◆ In 2000, the Agency will streamline and improve the information reporting process between state

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partners and EPA by increasing the number of state participants in the One Stop Reporting program from 29 to 38.

- ◆ In 2000, ensure that EPA's policies, programs and activities including 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.
- ◆ In 2000, improve public access to compliance and enforcement documents and data, particularly to high risk communities, through multi-media data integration projects and other studies, analyses and communication/outreach activities.
- ◆ In 2000, all community water systems will issue annual consumer confidence reports according to the rule promulgated in August 1998.
- ◆ In 2000, process all submitted facility chemical release reports; publish annual summary of TRI data; provide improved information to the public about TRI chemicals; and maximize public access to TRI information.
- ◆ In 2000 75% of EMPACT communities have in place, or have initiated, community-based strategies or time relevant environmental monitoring, information management and communication that will

result in sustained community capacity to deliver timely environmental information.

Goal 7: Key Programs

	<u>FY 1999</u> <u>Enacted</u>	<u>FY 2000</u> <u>President's</u> <u>Budget</u>
Right-to-Know		
Center for Environmental Statistics (CEIS)	\$3,965.80	\$8,054.40
Drinking Water Consumer Awareness	\$1,365.80	\$1,467.90
EMPACT	\$8,206.30	\$13,630.70
Environmental Education	\$7,767.60	\$8,426.10
GLOBE	\$0.00	\$1,000.00
Information Technology Management	\$4,234.80	\$6,743.50
Pesticide Registration	\$5,214.20	\$4,454.10
Pesticide Reregistration	\$5,461.70	\$4,111.40
Reinventing Environmental Information (REI)	\$12,547.80	\$15,731.80
SBREFA	\$760.30	\$777.30
Small Business Ombudsman	\$1,110.30	\$1,120.30
Small, Minority, Women-Owned Business Assistance	\$2,064.40	\$2,338.40
Superfund - Maximize PRP Involvement (including reforms)	\$364.40	\$0.00
Toxic Release Inventory / Right-to-Know (RtK)	\$19,799.60	\$18,811.50
Urban Environmental Quality and Human Health	\$0.00	\$3,395.00

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 vs FY 1999 Difference
Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems	\$346,996.2	\$321,747.4	(\$25,248.8)
Research for Ecosystem Assessment and Restoration	\$111,978.7	\$118,553.3	\$6,574.6
Research for Human Health Risk Assessment	\$50,573.7	\$56,229.1	\$5,655.4
Research to Detect Emerging Risk Issues	\$56,648.8	\$49,806.9	(\$6,841.9)
Pollution Prevention and New Technology for Environmental Protections	\$77,286.3	\$55,801.7	(\$21,484.6)
Increase Use of Integrated, Holistic, Partnership Approaches	\$16,390.5	\$16,663.8	\$273.3
Increase Opportunities for Sector Based Approaches	\$21,091.9	\$10,018.5	(\$11,073.4)
Regional Enhancement of Ability to Quantify Environmental Outcomes	\$6,505.5	\$7,659.8	\$1,154.3
Science Advisory Board Peer Review	\$2,486.7	\$2,636.2	\$149.5
Incorporate Innovative Approaches to Environmental Management	\$4,034.1	\$4,378.1	\$344.0
Total Workyears:	1,194.2	1,187.3	-6.9

Means and Strategy:

EPA has several strategies to strengthen the scientific basis for environmental protection and develop innovations that will allow achievement of our strategic objectives. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments

of its research and determine strategic planning priorities.

In 2000, EPA will continue the Agency's Postdoctoral Initiative, begun in 1998, to enhance our intramural research program. These positions will provide a constant stream of highly-trained postdoctoral candidates who can apply state-of-the-science training to EPA research issues. For

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2000, new post-doctoral candidates will be recruited to: (1) strengthen our ability to meet the scientific challenges of the next several years; (2) bring a fresh scientific perspective and new energy to our highest priority research and development programs by working with experienced ORD Principal Investigators; (3) work in critically important areas such as human exposure modeling in particulate matter and ecological risk assessment; and, (4) improve our workforce diversity. Post-doctoral resources are spread throughout the 2000 budget.

To better draw upon expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) Program of peer reviewed, mission-driven extramural grants. The Agency is also working with the National Research Council to identify emerging environmental issues for which we must begin planning the necessary research. EPA's research program will increase the understanding of environmental processes and the capability to assess environmental risks not only to human health, but also to ecosystems.

The emphasis of ecological monitoring research will shift from a Mid-Atlantic integrated assessment of ecosystem health to a Western Pilot demonstration of methods developed in the Mid-Atlantic. In addition, the Coastal Monitoring Initiative beginning in 2000 will fund the first national demonstration of the status and trends monitoring of the health of U.S. estuaries. Knowing the current condi-

tions of these ecosystems, how best to measure those conditions, and what problems exist are important parts of this effort and will provide essential input to the modeling and assessment elements of the program. Process and modeling research will seek to explain stressors and their effect on an ecosystem, as well as the way in which they cause that effect.

EPA is also committed to developing and verifying innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing current risk assessment and management strategies and guidance. In response to the heightened awareness and concern over children's health risks and the provisions of the new legislation on food safety, EPA established the Children's Health Research Program. In collaboration with the National Institute for Environmental Health Sciences (NIEHS), EPA has established eight university-based research centers to study the unique environmental risks that threaten the health of our children, with research focusing on childhood asthma and developmental disorders. The 2000 research program includes plans to establish one additional center focused on children's health research to conduct basic and applied research in combination with community-based prevention efforts that focus on identifying and preventing environment-related diseases in children. This center will look at non-asthma related research issues including developmental disorders. Agency research efforts for asthma are part of the interagency work

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under the President's Task Force on Environmental Health Risks and Safety Risks to Children.

The Agency will establish research capability and mechanisms to anticipate and identify environmental or other changes that may portend future risk. A clear vision of future environmental risk will enable EPA to manage strategically for tomorrow and tactically for today. Substantial capability to discern early warnings and patterns of change will be developed through work undertaken on endocrine disruptors. Benefits will include an improved framework for decision-making, increased ability to anticipate and perhaps deter serious environmental risks, and enhanced communication with the public and other stakeholders.

In order to promote decisions which place pollution prevention as the first solution among many, research will focus on the development of methods and decision tools that are more quantitative and easier for stakeholders and decision-makers to use than those currently available. Research on pollution prevention technology and approaches will accelerate the adoption and incorporation of pollution prevention by developing, testing, and demonstrating techniques applicable across economic sectors. This research will test the ability of risk assessors and risk managers to develop tools and methodologies which are meaningful and understandable to the public in terms of the costs and benefits associated with the magnitude of the risk reduction options.

A key element of EPA's strategy for reinvention is testing and adopting innovative policy tools designed to achieve better protection at less cost. The Agency has a number of new tools and approaches that are being tested or implemented in various environmental programs, including: market trading and banking, third party certification of environmental performance, and recognition and incentives for environmental stewardship. In each area, EPA is looking to advance the application of the innovative tool or approach by promoting broader testing and incorporation into our system of environmental protection. For example, EPA's Permit Action Plan outlines a broad strategy for building the next generation of environmental permitting. This strategy will harmonize requirements across media, and will make permitting more accessible to the public and more flexible for facilities.

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

Sustainable industry programs serve as incubators and developers of innovative approaches to environmental policy making, testing alternative regulatory and programmatic approaches through regional projects, and multi-stakeholder processes. The experience

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gained in working with six industry sectors on the Common Sense Initiative provides the basis for moving forward with sector-based approaches to environmental protection.

Also, President Clinton created Project XL in March 1995 to provide regulated entities and other stakeholders with the opportunity to develop and implement alternative environmental management strategies that achieve superior environmental performance in exchange for regulatory flexibility. Sector-based approaches will offer valuable supplements to traditional environmental policy and may become the predominant means for environmental protection in the 21st century.

Nearly 7,000 businesses, trade association, citizens groups, state and local governments, and universities are volunteering to improve environmental performance in a timely, cost-effective way through an array of EPA partnership programs. Known collectively as Partners for the Environment, these programs complement traditional regulatory approaches to environmental protection.

Partners set practical, meaningful goals to improve and better protect the environment -- from conserving water and energy to reducing hazardous emissions, waste, and pesticide risks. These efforts are good for the environment, make good business sense, and prove that pollution prevention pays.

Highlights

Research is an important aspect of the Agency's mission and ensures a strong scientific foundation for the process of identifying public health and environmental issues and the approaches taken to address them. EPA's 2000 Annual Plan proposes a robust program which continues to support its commitment to developing and applying the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

Ecosystems Protection Research

Natural ecosystems provide valuable services and resources to the public, such as air and water purification, flood control, raw materials for manufacturing and industrial processes, food, as well as less tangible benefits such as recreation. Many human activities alter or damage ecosystems and their ability to provide these goods and services. In order to balance the growth of human activity and the need to protect the environment, it is important to understand the current condition of ecosystems, what stressors are changing that condition, what are the consequences of those changes, and what can be done to prevent, mitigate, or adapt to those changes. EPA's ecosystems protection research is organized in four main areas to address these questions: ecological monitoring, modeling, risk assessment, and risk management.

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Ecological monitoring research addresses the question, “What is the current condition of the environment, and what stressors are most closely associated with that condition?” To do this, researchers develop indicators, monitoring systems, and designs for measuring the exposures of ecosystems to multiple stressors and the response of ecosystems at local, regional, and national scales. In 2000, the Coastal Research Initiative will provide EPA with baseline and trend analyses for important data gaps such as the aquatic health of our nation’s estuaries.

Process and Modeling Research addresses the question, “What are the biological, chemical, and physical processes affecting the condition of ecosystems and their response to stressors?” Drawing from information gathered by monitoring efforts, process and modeling research develops a basic understanding of the processes that govern ecosystem function, and the technology to model those processes. This modeling ability allows for predictions of future landscapes, stressor patterns, ambient conditions, and receptor responses. Predicting the impact of changes in conditions allows resource managers to address problems in ways that will more accurately achieve the environmental protection goals they seek.

Risk Assessment Research addresses the question, “What is the relative risk posed to ecosystems by stressors, alone and in combination, now and in the future?” Ecological assessments can link stressors with conse-

quences and evaluate the potential for damage to particular ecosystems. This is a valuable tool for environmental risk managers at local, state, and federal levels, enabling them to link high priority ecosystems with ecosystems at high risk. EPA’s research efforts in support of the National Science and Technology Council’s Integrated Science for Sustainable Ecosystems Initiative will develop methods and models to integrate socioeconomic analysis with landscape ecology and ecological risk assessment and give EPA, state, and local community-based environmental partners capability to identify the most significant environmental stress and select risk reduction alternatives to improve or sustain biological and chemical water quality in streams, rivers, and estuaries. This program will also develop a capacity to evaluate and measure the success or failure of policies in sustaining or improving ecosystem health.

Risk Management and Restoration Research addresses the question, “What options are available to manage the risk to, or to restore, degraded ecosystems?” Given the rate of development of the man-made environment, present regulatory approaches may not always limit risks to vulnerable ecosystems to tolerable levels. There is a need to develop new, cost-effective prevention, control, and remediation approaches for sources of stressors, and adaptation approaches for ecosystems.

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Research to Improve Human Health Risk Assessment

Advances in the state of environmental science have illustrated that new risk assessment methods are needed to investigate complex environmental and human health issues that were not considered by early environmental legislation. Creating a strong scientific foundation for risk assessment and for subsequent risk management decisions requires research to reduce significant areas of scientific uncertainty. In recent years, a number of national scientific advisory groups have developed specific recommendations to assist in strengthening this foundation. EPA has identified three major areas of uncertainty as the focus for its Human Health Risk Assessment Research Program: 1) human exposure measurements and models; 2) identifying/characterizing hazards and assessing dose response; and 3) characterizing and assessing variation in human exposure and susceptibility to disease. Because substantial uncertainties are associated with these areas, resolution will greatly advance the science of human health risk assessment.

Research on human exposure measurements and models will focus on demonstrating a model to assess, predict, and diagnose the population distribution of multi-media, multi-pathway exposures to major classes of environmental agents. Human exposure measurement research will continue to develop, demonstrate, and evaluate human exposure measurement and surveillance through the National Human Exposure

Assessment Survey (NHEXAS) program and the Borders XXI (NAFTA) program. Research to develop multipathway exposure models will continue to develop, demonstrate, and evaluate measurement-based models that represent multi-pathway source-exposure-biomarker-dose relationships and the physical and chemical factors that affect potential and absorbed dose. Research on residential pesticides will continue to focus on methods to significantly improve our understanding of the extent of human exposure to specific pesticides and toxic substances.

Research to identify/characterize hazards and assess dose response addresses both qualitative (hazard identification) and quantitative (dose-response analysis) concerns associated with current risk assessments. This research will focus on providing mechanistically-based data, tools, and approaches for more quantitative and biologically defensible human health risk assessments.

Research to characterize/assess variation in human exposure and susceptibility to disease has strong support from national scientific advisory organizations, the Administration and Congress. EPA is also committed to developing and verifying innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing current risk assessment and management strategies and guidance. In collaboration with the National Institute for Environmental Health Sciences (NIEHS), EPA has established eight

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university-based research centers to study the unique environmental risks that threaten the health of our children, with research focusing on childhood asthma and developmental disorders. The 2000 research program includes plans to establish one additional center focused on children's health research to conduct basic and applied research in combination with community-based prevention efforts that focus on identifying and preventing environment-related diseases in children. This center will look at non-asthma related research issues including developmental disorders. Agency research efforts for asthma are part of the interagency work under the President's Task Force on Environmental Health Risks and Safety Risks to Children.

Emerging Risks Research

In 2000, research on emerging environmental risk will respond directly to the recommendations of numerous external advisory panels, including the Committee on Research Opportunities and Priorities for EPA under the National Academy for Public Administration, and EPA's Science Advisory Board. Our goal is to establish a clear vision of future environmental risk which will enable EPA to manage strategically for tomorrow and tactically for today. Benefits will include an improved framework for decision-making, increased ability to anticipate and perhaps deter serious environmental risks, and enhanced communication with the public and other stakeholders.

Evidence has been accumulating that humans and domestic and wildlife species have suffered adverse health consequences resulting from exposure to environmental chemicals that interact with the endocrine system, known as endocrine disruptors (EDC). EPA has developed the Endocrine Disruptor Research Strategy for addressing areas of major uncertainty. In 2000, the highest priority areas of the Endocrine Disruptor Research Strategy will be: conducting integrated toxicology and exposure studies in ecological systems or human populations with suspected contamination or exposure; the development of PBPK/BBDR models; the identification of major sources of EDCs entering the environment; and the development of tools for risk management. The program will also continue to investigate the nature and extent to which environmentally relevant exposures to chemicals are producing adverse effects in humans and wildlife species.

We will continue to maintain a strong graduate fellowship program which was initiated in 1995 for the purpose of training the next generation of scientists and engineers. By providing support for masters and doctoral students in environmental sciences and engineering, EPA helps to develop the Nation's environmental and technology base for addressing the environmental concerns in the next century. The Exploratory Grants research program generates new ideas and produces new scientific information by encouraging creativity and innovation in scientific research. Through publication of an annual general solicitation,

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the program defines general areas in which there exist significant gaps in scientific knowledge and understanding, and allows individual investigators from the academic research community to conceive, define, and propose research projects.

Pollution Prevention and New Technologies

EPA supports pollution prevention as a necessary and logical strategy for dealing with high-risk human health and environmental problems that are addressed by Federal environmental, health, and safety regulations. In order to promote decisions which place pollution prevention as the first solution among many, research must begin to focus on the development of methods and decision tools that are more quantitative and easier for stakeholders and decision makers to use than those currently available. Two areas of research contributing to the achievement of the objective's goals are: 1) the Environmental Technology Verification (ETV) program; and 2) the Mercury Initiative.

ETV was created to substantially accelerate the introduction of new environmental technologies into the domestic marketplace. In 2000, the program will support the development and implementation of innovative approaches for current and future environmental problems. As a result of the interest in the ETV program abroad, EPA will expand the application of U.S. technologies, verified under ETV, to the international marketplace. ETV will

also continue in this effort under its twelve pilots; complete the last year of its 5 year pilot phase (1995-2000); and begin preparation of a report to Congress for 2001. The report will contain a summary of the major outputs of the pilot phase, the costs of verification, the results of verification in moving better technologies into use, and recommendations for procedures to effectively conduct an ongoing program.

Mercury research will focus on the speciation and control of mercury emissions from coal-fired utilities and other combustors, risk management alternatives for non-combustion sources of mercury, and a continuing emphasis on collecting and analyzing data and information on mercury risks and mercury risk communication. Improved techniques for controlling mercury emissions into the environment will allow the Agency to achieve its programmatic and regulatory goals and meet an accelerated time table for reducing mercury releases.

Increased Community-Based Approaches

In 2000, EPA will continue to strengthen local partnerships to address serious environmental risks to human health or ecosystems. Regional Geographic Initiatives (RGI) are an approach EPA Regional offices use to partner with states, local governments, private organizations, and others. The work targets specific environmental problems identified as high risk to human health and ecosystems which are

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not adequately addressed by other Agency resources.

Increased Facility-and Sector-based Strategies

EPA's strategy for reinvention is testing and adopting innovative policy tools designed to achieve better protection at less cost. The Agency has a number of new tools and approaches that are being tested or implemented in various environmental programs, including: market trading and banking, third party certification of environmental performance, and recognition and incentives for environmental stewardship.

Sector strategies complement current EPA activities by allowing the Agency to approach issues more holistically; tailor efforts to the particular characteristics of each sector; identify related groups of stakeholders with interest in a set of issues; link EPA's efforts with those of other agencies; and craft new approaches to environmental protection. Sustainable industry programs serve as incubators and developers of innovative approaches to environmental policy making, testing alternative regulatory and programmatic approaches through regional projects, and multi-stakeholder processes. Sector-based approaches will offer valuable supplements to traditional environmental policy and may become the predominant means for environmental protection in the 21st century.

Science Advisory Board Peer Reviews

The Agency plans to support the activities of the Science Advisory Board (SAB) which provides independent expert advice to Congress, the Administrator, and the Agency on scientific and engineering issues that serve as the underpinnings for Agency regulatory decision making. Each year, the Administrator and EPA program offices nominate numerous issues to the SAB for peer review. The SAB selects several of these issues for review each year, culminating in reports that help the Agency make better use of science in its decision-making process. The issues that are not selected for review can be nominated again the following year. The SAB's broad, objective review of important scientific and technical issues promotes sound science within the Agency's scientific and technical programs. The use of the SAB for peer reviews supports the Agency-wide peer review evaluation efforts, in response to GAO findings in 1997.

2000 Annual Performance Goals:

- ◆ In 2000, 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.
- ◆ In 2000, provide methods to estimate human exposure and health effects from high priority urban air toxics, and complete health assessments for

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the highest priority hazardous air pollutants (including fuel/fuel additives).

- ◆ In 2000, report on monitoring findings in the Mid-Atlantic Region as a cost effective means of measuring the condition of these systems.
- ◆ In 2000, develop risk assessment guidance and regional assessments concerning risks to children exposed to environmental contaminants.
- ◆ In 2000, develop tools to identify hazards and formulate strategies to manage risks from exposure to endocrine disrupting chemicals capable of inducing adverse effects in humans and wildlife.
- ◆ In 2000, 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.
- ◆ In: 2000, all 50 Project XL projects will be implemented.

Goal 8: Key Programs

	FY 1999	FY 2000
	<u>Enacted</u>	<u>President's</u>
		<u>Budget</u>
Sound Science		
Clean Water Action Plan: Related Research	\$1,406.00	\$4,689.30
Coastal Environmental Monitoring	\$0.00	\$6,549.00
Common Sense Initiative	\$4,679.50	\$2,755.50
Endocrine Disruptor Research	\$12,466.70	\$12,735.20
Environmental Monitoring and Assessment Program, EMAP	\$33,255.00	\$33,955.00
Environmental Technology Verification (ETV)	\$6,990.50	\$7,749.50
Human Health Research	\$50,323.80	\$55,836.70
Project XL	\$3,359.90	\$3,454.40
Regional Geographic Program	\$8,070.60	\$11,780.50
Regional Science and Technology	\$6,021.00	\$7,659.80
Reinvention Programs, Development and Coordination	\$4,334.10	\$4,378.10
Sustainable Development Challenge Grants	\$4,701.80	\$4,714.80

A Credible Deterrent to Pollution and Greater Compliance with the Law

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

Resource Summary (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 – FY 1999 Difference
A Credible Deterrent to Pollution and Greater Compliance with the Law	\$319,390.3	\$331,335.0	\$11,944.7
Enforcement Tools to Reduce Non-Compliance	\$272,965.9	\$292,917.6	\$19,951.7
Increase Use of Auditing, Self-Policing Policies	\$46,424.4	\$38,417.4	(\$8,007.0)
Total Workyears:	2,554.4	2,540.1	-14.3

Means and Strategy:

Many of the environmental improvements in this country during the past three decades can be attributed to a strong set of environmental laws and EPA's aggressive enforcement of them. Due to the breadth and diversity of private, public, and federal facilities regulated by EPA under various statutes, the Agency needs to target its enforcement and compliance assurance activities strategically to address the most significant risks to human health and the environment and to ensure that certain populations do not bear a disproportionate environmental burden. A strong enforcement program identifies noncompliance problems, punishes violators, strives to secure a level economic playing field for law-abiding companies, and deters future violations. EPA's continued enforcement efforts will be strengthened through the development of measures to assess the

impact of enforcement activities and assist in targeting high priority areas.

State, Tribal and local governments bear much of the responsibility for ensuring compliance, and EPA works in partnership with them and other Federal agencies to promote environmental protection. Further, EPA cooperates with other nations to enforce and ensure compliance with international agreements affecting the environment. At the Federal level, EPA addresses its responsibilities under the National Environmental Policy Act (NEPA) by seeking remedies for potentially adverse impacts of major actions taken by EPA and other Federal agencies.

The Agency's enforcement and compliance assurance program uses compliance assistance and incentives tools to enhance voluntary compliance with regulatory requirements and reduce adverse public health and environmental

A Credible Deterrent to Pollution and Greater Compliance with the Law

problems. Maximum compliance requires the active efforts of the regulated community to police itself. EPA supports the regulated community by assuring that requirements are clearly understood and by helping industry find cost-effective options to comply through the use of pollution prevention and innovative technology. EPA will continue to explore options for encouraging self-directed audits and disclosure; measuring and evaluating the effectiveness of Agency programs in improving compliance rates; providing information and compliance assistance to the regulated community; and developing innovative approaches to meeting environmental standards through better communication, co-operative approaches and application of new technologies.

Highlights:

Compliance Monitoring and Civil and Criminal Enforcement

EPA will continue to support deterrence and compliance activities by devoting a vast majority of its compliance monitoring resources for on-site inspections including monitoring, sampling and emissions testing. In 2000, the compliance monitoring program will continue the cross-cutting, multi-media initiative begun in 1999 which make full use of the Agency's statutory authorities.

In 2000, the Agency's enforcement initiatives will include support of the Clean Water Action Plan (CWAP) in

terms of increased enforcement in priority watersheds and the Children's Health Initiative by supporting air quality enforcement efforts. In 2000, the Agency will provide funding to support a tribal training program to assist tribal regulatory officials in effectively managing compliance and enforcement programs.

Compliance Assistance and Incentives

The Agency will continue to support compliance assistance and incentive tools to enhance voluntary compliance with regulatory requirements and reduce public health problems. In 2000, the Compliance Incentives program will continue to implement the policy on Incentives for Self-Policing as a core element of the enforcement and compliance assurance program. The Compliance Assistance program will continue to provide information and technical assistance to the regulated community to increase its understanding of all statutory or regulatory environmental requirements.

State and Tribal Capacity

In 2000, the Agency's enforcement and compliance assurance program will work with and support state agencies implementing authorized, delegated, or approved environmental programs. The Agency provides grant funding, oversight, training and technical assistance to states and tribes. We are requesting additional funds to develop and implement compliance and enforcement programs on tribal lands. The increase will build upon a base program

A Credible Deterrent to Pollution and Greater Compliance with the Law

which assists tribes in implementing pesticide compliance and enforcement programs on tribal lands where states have no enforcement authority.

2000 Annual Performance Goals:

- ◆ In 2000, deter & reduce non-compliance and achieve environmental and human health improvements by maintaining a strong, timely and active enforcement presence. EPA will direct enforcement actions to maximum compliance and address environmental and human health problems; 75 percent of concluded enforcement actions will require environmental or human health improvements, such as pollution reduction.
- ◆ In 2000, deter non-compliance by maintaining appropriate levels of compliance monitoring activity, particularly in priority areas. In 2000, EPA will conduct 15,700 inspections and investigations, 50 percent of which are targeted at priority areas.
- ◆ In 2000, improve capacity of states, localities and tribes to conduct enforcement and compliance assurance programs. EPA will provide grants, guidance documents, training, classes and seminars, and assist with selected inspections.
- ◆ In 2000, ensure compliance with legal requirements by assuring that

hazardous waste exports from the United States are properly handled. Implement U.S. international commitments, and gain enforcement and compliance cooperation with other countries, especially along U.S. borders (Mexico/Canada).

- ◆ In 2000, increase entities self-policing and self-correction of environmental problems through use of EPA incentive policies: small business, small community and audit policies over 1997 levels.

Goal 9: Key Programs

	FY 1999	FY 2000
	<u>Enacted</u>	<u>President's</u>
		<u>Budget</u>
Credible Deterrent		
Civil Enforcement	\$83,090.40	\$89,863.60
Civil Enforcement - CWAP/AFO Related	\$0.00	\$1,462.00
Common Sense Initiative	\$1,082.80	\$714.30
Compliance Assistance and Centers	\$23,215.40	\$18,054.50
Compliance Incentives	\$4,075.60	\$3,646.00
Compliance Monitoring	\$56,838.90	\$64,170.30
Criminal Enforcement	\$33,786.50	\$35,635.40
Enforcement Training	\$4,435.80	\$5,117.20
NEPA Implementation	\$9,401.60	\$9,697.70
Project XL	\$2,904.60	\$3,008.50
RCRA State Grants	\$43,222.70	\$43,227.00
State Pesticides Enforcement Grants	\$19,511.40	\$19,911.60
State Toxics Enforcement Grants	\$7,364.20	\$7,364.20

Effective Management

Strategic Goal: EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Summary Resource (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 - FY 1999 Difference
Effective Management	\$645,174.0	\$715,653.6	\$70,479.6
Executive Leadership	\$31,112.6	\$32,155.4	\$1,042.8
Management Services, Administrative, and Stewardship	\$220,806.1	\$245,211.1	\$24,405.0
Building Operations, Utilities and New Construction	\$353,366.1	\$397,485.1	\$44,119.0
Provide Audit and Investigative Products and Services	\$39,889.2	\$40,802.0	\$912.8
Total Workyears:	2,991.2	3,003.3	12.1

Means and Strategy:

Efforts under this goal support the full range of Agency activities for a healthy and sustainable environment including: effective vision and leadership; sound management practices; results-based planning and budgeting; fiscal accountability; and quality customer service. Rational policy guidance and careful stewardship of our resources form the foundation for everything EPA does. The effectiveness of EPA's management will determine, in large measure, how successful we are in telling the story on our annual progress toward the goals identified in the Agency's annual plan and the long-term goals in the strategic plan. Agency management systems and processes will be supported by independent evaluations that promote efficient and effective

programs in order to obtain the greatest return on taxpayer investment.

The Agency will provide vision and leadership as well as executive direction and policy oversight for all EPA programs. In keeping with its commitment to protect children's health, the Agency will target resources towards its many diverse children's activities. In 2000, the Agency will evaluate health outcomes related to environmental health effects for asthma and lead addressed in 11 Pilot Child Health Champion Communities. The Agency will provide policy direction and guidance on equal employment opportunity and civil rights. The Agency's Administrative Law Judges and its Environmental Appeals Board

Effective Management

Judges will issue decisions on Administrative complaints and environmental adjudications, respectively, in a timely manner.

The Agency will provide the management services, administrative support and operations to enable the Agency to achieve its environmental mission while meeting its fiduciary and workforce responsibilities. EPA will manage an integrated planning, budgeting, analysis, financial management and accountability process to ensure effective stewardship of resources which meets statutory requirements of the Government Performance and Results Act (GPRA), Chief Financial Officers (CFO) Act, and related legislation. In 1999, the Agency will implement an accountability system that captures all key performance measures, and develop a cost accounting system to enable Agency managers and stakeholders to know the full cost of Agency programs and the resources associated with achievement of environmental results. The strategy for ensuring sound management of administrative services will be accomplished by managing information systems effectively, ensuring a high level of integrity and accountability in the management of grants and contracts, and investing in our human resources to ensure that the Agency's workforce is of the highest caliber and is fully prepared to deliver national leadership and expertise in environmental protection.

The Agency will provide a quality work environment which places high value on employee safety and security and the design and establishment of state-of-the-art lab-

oratories. These facilities provide the tools essential for researching innovative solutions to current and future environmental problems and enhancing our understanding of environmental risks. Plans for building operations and new construction support existing infrastructure requirements that ensure healthy, safe and secure work environments that reflect the pollution prevention values of EPA and help fulfill the scientific and functional requirements of our programs. EPA has adopted an aggressive strategy to utilize energy savings performance contracts to reduce energy consumption significantly over the next five years. In 2000, EPA makes major strides towards completing the consolidated new Headquarters, as well as the consolidated research lab at Research Triangle Park in North Carolina.

The Agency will provide audit and investigative products and services, all of which can facilitate the accomplishment of the Agency's mission. The Agency will increase performance audit work with a focus on environmental results, and assist the Agency in implementing performance evaluation to promote full compliance with GPRA. We will continue emphasizing contract and assistance agreement audits and investigations to ensure integrity in the application of Agency resources. The Agency plans to increase collaboration between audits and investigations to reduce the risk of fraud and other improprieties. EPA will also increase assistance and consulting services to the Agency to help resolve significant management problems and achieve maximum efficiency and effectiveness. These strategies will

Effective Management

assist the Agency in accomplishing its mission and improve the performance and integrity of its programs and operations.

A major concern of Congress has been the federal response to the Year 2000 date conversion issue. With respect to this issue, it is anticipated that all Agency mission-critical systems will be Year 2000 compliant by March 1999. In 2000, the Agency will continue operational testing to ensure that all mission-critical systems continue to function correctly to support core functions without interruption across the Year 2000 date change.

Highlights:

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

In keeping with our commitment to protect children's health, the Agency will direct resources toward the programs that will protect the children from a range of environmental hazards.

In 2000, the Agency will focus on reducing asthma through reduction and avoidance of key asthma triggers, including environmental tobacco smoke, prevalent indoor allergens and ambient air pollution. The Agency will employ sound science methods and proper data management to assess risks to children. This is achieved by measuring exposures to multiple chemicals in a national sample of infants and children and by developing data on the physiological and biological characteristics of the young that affect doses to target organs for use in Agency risk assessments. EPA will ensure that its standards address the heightened risks faced by children and that all covered regulations being revised or developed in EPA address children's environmental health issues.

The Agency will provide sound management of administrative services throughout the Agency. In 2000, the Agency will take a systematic and rigorous approach toward modernizing its information systems. A systems modernization fund will be established to provide resources to develop new and upgrade existing information systems throughout the Agency. Initial funding of the modernization pool has been provided by Agency offices. Strict criteria will be used in the distribution of resources. Modernization projects will be funded based on competitive review, be required to provide matching funds, and will follow a planned and managed schedule.

The Agency's building operations and new construction budget ensures a healthy, safe and secure work environment for its employees, and integrates pollution prevention and state-

Effective Management

of-the-art technology into its daily activities. New construction and renovation activities will continue at the consolidated complex at Research Triangle Park (RTP), National Enforcement Investigations Center (NEIC) and the New Headquarters project. This request funds the final construction phase of the RTP project as well as transition costs for RTP and HQs. EPA will also address critical repairs in EPA facilities related to employee health and safety. These facilities provide the tools essential for researching innovative solutions to current and future environmental problems and enhancing our understanding of environmental risks.

The Agency will continue to manage its integrated planning, budgeting, analysis and accountability process. In 2000, efforts will continue to link annual plans to the long-term goals and objectives of the Agency in order to deliver the best environmental results possible given the resources appropriated by Congress. The Agency will provide more accurate financial reporting through cost accounting for improved environmental decision making. The Agency will also continue to increase consultation with the EPA Science Advisory Board and external parties.

The Agency will strengthen pre-award and post-award management of assistance agreements. For example, by July 2000, EPA will eliminate the entire close-out backlog for non-construction grants that ended before September 30, 1997. In the contracts area, Agency efforts will focus on selecting the appropriate contract vehicle to deliver

best value for the agency's mission and taxpayer, including reducing the use of cost-reimbursable contracts. All contracts will be evaluated for possible award or conversion to performance based contracts. In addition, the Agency will put increased emphasis on contract oversight, including speeding up contract processes through fast-track system enhancements and automation efforts.

In 2000, the Agency will implement its workforce development strategy. The purpose of this initiative is to attract, recruit, develop, and deploy EPA's employees to address the critical environmental issues of the 21st century. This initiative will implement a support staff development pilot to improve the professionalism and performance of our clerical workforce; will identify and develop career tracks for employees skills and tools requirements needed to fully develop in their chosen occupation; and will develop leadership skills in people throughout the organization while improving the managerial competencies of our line managers. A significant component of the initiative is the EPA intern program which is designed to hire diverse, high performing individuals who will become part of the Agency future leadership.

The Agency will continue to bring cases to settlement. The Environmental Appeals Board will issue final Agency decisions in environmental adjudications on appeal to the Board. These decisions are the end point in the Agency's administrative enforcement and permitting programs. The Administrative Law Judges (ALJs) who provide hearings to those accused of

Effective Management

environmental violations are increasingly using alternative dispute resolution techniques in bringing cases to settlement and thereby, avoiding more costly litigation.

EPA will provide audit and investigative products and services, all of which can facilitate the accomplishment of its mission. Reviews will be performed on Agency contracts. EPA will also start reviews of Agency compliance with the Government Performance and Results Act through selective verification and validation of the process. The Agency will continue investigations of alleged fraud, waste, abuse, or other illegal activities to detect and deter fraud, abuse, and other improprieties, and help promote cost-effective programs and the integrity of contractors and employees.

2000 Annual Performance Goals:

- ◆ In 2000, evaluate health outcomes related to environmental health effects for asthma and lead addressed in 11 Pilot Child Health Champion Communities.
- ◆ In 2000, 100 percent of EPA's GPRA implementation components (planning, budgeting, financial management, accountability, and program analysis) are completed on time and meet customer needs.
- ◆ In 2000, EPA will improve the capability of its workforce by: formalizing a leadership development approach; rolling out a training curriculum to enhance necessary

cross-functional skills; clearly identifying and defining support staff career paths; and continuing to hire talented and diverse individuals.

- ◆ In 2000, all 58 mission-critical systems will continue to support core Agency functions without interruption across Year 2000 date change.
- ◆ In 2000, EPA will ensure that all new and ongoing construction projects are progressing and completed as scheduled.
- ◆ In 2000, the OIG will provide objective, timely, and independent auditing, consulting, and investigative services.

Goal 10: Key Programs

	FY 1999 <u>Enacted</u>	FY 2000 President's <u>Budget</u>
Effective Management		
Administrative Law	\$2,324.30	\$2,193.40
Assistance Agreement Audits	\$6,830.50	\$6,632.00
Assistance Agreement Investigations	\$2,650.40	\$2,728.40
Childrens Health, Program Development and Coordination	\$6,157.50	\$5,744.80
Civil Rights/Title VI Compliance	\$1,637.10	\$1,331.70
Contract and Procurement Investigations	\$2,913.00	\$2,975.80
Contract Audits	\$4,950.60	\$5,381.60
Contracts Management	\$24,986.00	\$27,503.90
EMPACT	\$81.30	\$563.60
Employee Integrity Investigations	\$953.40	\$981.60
Environmental Finance Center Grants (EFC)	\$1,065.00	\$940.00
Facility Operations: Agency Rental/ Direct Lease	\$170,571.80	\$193,223.60
Facility Operations: Agency Utilities	\$10,015.20	\$12,414.80
Facility Operations: Repairs and Improvements	\$15,428.00	\$20,410.50
Facility Operations: Security	\$12,962.20	\$13,162.20
Financial Statement Audits	\$4,187.50	\$4,296.20
Grants Management	\$8,568.80	\$9,455.70
Human Resources Management	\$21,932.00	\$24,139.30
Immediate Office of the Administrator	\$2,791.30	\$3,729.80
Information Technology Management	\$21,975.10	\$22,282.50
New Construction :RTP New Building Project	\$36,000.00	\$49,040.50
New Construction: New Headquarters Project	\$15,945.30	\$17,496.30
Planning and Resource Management	\$69,120.10	\$71,581.60
Program Audits	\$10,264.40	\$10,509.60
Program Integrity Investigations	\$911.50	\$927.80
Regional Management	\$42,535.00	\$42,818.40
Regional Program Infrastructure	\$66,532.20	\$67,954.20
Reinventing Environmental Information (REI)	\$2,507.10	\$250.00

ADDITIONAL INFORMATION

Better America Bonds

As one feature of the Administration's comprehensive Livability Agenda, Better America Bonds will help communities grow in ways that ensure sustainable economic growth. The President's budget proposes a new, innovative, financing tool providing \$9.5 billion in bonding authority to state, local, and tribal governments over five years through the use of Federal tax credits instead of bond interest. In lieu of interest payments from state and local governments, the Better American Bond program will provide to bond holders approximately \$1.2 billion in tax credits over the 15 year life of bonds issued using the \$1.9 billion in proposed 2000 bond authority.

EPA will be at the forefront of giving local communities maximum flexibility and resources to address the most pressing environmental needs. This new tool will allow communities to preserve green space, create or restore urban parks, protect water quality, and clean up Brownfields. Communities will, for instance, be able to protect land either by acquiring title or purchasing permanent easements. Bond proceeds can also be used for reforestation, and replanting. Pressure to develop green space from previously undeveloped properties can be lessened by enhancing alternative land for redevelopment such as Brownfields for new economic uses. Rivers, lakes, coastal waters, and wetlands can be restored or protected from polluted runoff through land acquisition and/or other measures.

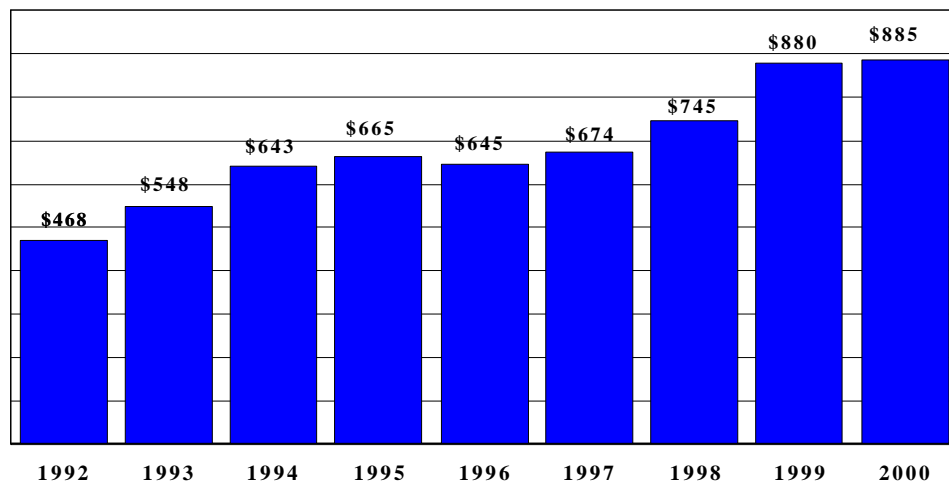
To become eligible for a bond allocation, state, local and tribal governments will submit proposals to EPA for initial review in consultation

with other Agencies. EPA will award bond allocations in conjunction with the Vice President's Community Empowerment Board and other Agencies. Preferences will be given to regional proposals that reflect collaborative planning by neighboring communities, particularly partnerships among cities, suburbs, and rural areas.

Through the availability of these bonds, and the support of federal tax credits, EPA will assist in building healthy, livable communities for the 21st century. Better America Bonds will enable states, tribes and local governments to reconnect with their land and water, preserve green space and provide attractive settings for economic development.

State, Local and Tribal Grants

(dollars in millions)



In 2000, the President's Budget requests a total of \$885.0 million for 16 'categorical' program grants for state and tribal governments. This is an increase of \$5.0 million over 1999. These grants are part of EPA's Operating Programs even though they are funded in the State and Tribal Assistance Grant (STAG) appropriation account. EPA will continue to pursue its strategy of building and supporting state, local and tribal capacity to implement, operate, and enforce the Nation's environmental laws. Most environmental laws envision establishment of a decentralized nationwide structure to protect public health and the environment. In this way, environmental goals will ultimately be achieved through the actions, programs, and commitments of state, tribal and local governments, organizations and citizens.

In 2000, EPA will continue to give more flexibility to state and tribal governments to manage their environmental programs as well as provide technical and financial assistance. First,

EPA and its state and tribal partners will continue implementing the National Environmental Performance Partnership System (NEPPS). NEPPS is designed to allow states more flexibility to operate their programs with less interference from the Federal government, while increasing emphasis on measuring and reporting environmental improvements. Second, Performance Partnership Grants (PPGs) will continue to allow states and tribes funding flexibility to combine categorical program grants to address environmental priorities.

HIGHLIGHTS:

Air and Radiation Program Grants

In 2000, the President's Budget requests a total of \$217.9 million for Air and Radiation Program grants to help state and tribal governments address air and radiation program requirements. This amount represents a net increase of \$3.2 million over 1999. Specific

State, Local and Tribal Grants

increases include: (1) a \$13.7 million investment to meet requirements mandated by the ISTEA; and (2) a \$3.0 million investment for additional ambient monitoring of air toxics in urban areas.

Underground Storage Tanks Grants

In 2000, the President's Budget requests a total of \$11.9 million for the Underground Storage Tanks (UST) grant program. The UST program will continue to support partnerships with state and tribal governments. The President's Budget request includes an increase of \$1.4 million for grants to Indian tribes to assist them in developing the capability to administer and implement the UST program.

Enforcement Program Grants

In 2000, the President's Budget requests a total of \$27.3 million for Pesticides and Toxic Substances Enforcement grants. An increase of \$0.4 million is requested to provide training to senior Tribal regulatory officials in the latest theories and techniques for effective compliance and compliance programs under the FIFRA Cooperative Agreements.

Elimination of Tribal Cap on Non-point Sources

In 2000, the President's Budget is proposing to eliminate the statutory one-third of one percent cap on Clean Water Act section 319 Non-point Source

Pollution grant funds that may be awarded to Tribes. This proposal is in recognition of a clear gap between tribal non-point source program needs and available funds. The number of tribes applying for and receiving section 319 Non-point Source Pollution (NPS) grants have steadily increased from two in 1991 to eleven in 1999. Currently, 20 tribes have met the eligibility requirements to receive section 319(h) program grants. This number is expected to increase annually as more of the 554 federally recognized tribes become eligible to participate in this program (23 tribes are working to become program eligible). In 1999, because of the statutory cap, only \$0.7 million of the \$200.0 million total appropriated for Section 319 grants is available to the tribes.

State and Tribal Assistance Grants

(dollars in thousands)

<u>Grant</u>	<u>FY 1998 Enacted</u>	<u>FY 1999 Enacted</u>	<u>FY 2000 President's Budget</u>
<u>Air & Radiation</u>			
State and Local Assistance	\$181,933.0	\$195,533.0	\$198,690.0
Tribal Assistance	\$10,168.8	\$11,068.8	\$11,068.8
Radon	<u>\$8,158.0</u>	<u>\$8,158.0</u>	<u>\$8,158.0</u>
Subtotal:	\$200,259.8	\$214,759.8	\$217,916.8
<u>Water</u>			
Pollution Control (Section 106)	\$95,529.3	\$115,529.3	\$115,529.3
Non-point Source	\$105,000.0	\$200,000.0	\$200,000.0
Wetlands Program	\$15,000.0	\$15,000.0	\$15,000.0
Water Quality Cooperative Agreements	<u>\$20,000.0</u>	<u>\$19,000.0</u>	<u>\$19,000.0</u>
Subtotal:	\$235,529.30	\$349,529.3	\$349,529.3
<u>Drinking Water</u>			
PWSS	\$93,780.5	\$93,780.5	\$93,780.5
UIC	<u>\$10,500.0</u>	<u>\$10,500.0</u>	<u>\$10,500.0</u>
Subtotal:	\$104,280.5	\$104,280.5	\$104,280.5
<u>Hazardous Waste</u>			
H.W. Financial Assistance	\$98,598.2	\$98,598.2	\$98,598.2
Underground Storage Tanks	<u>\$10,544.7</u>	<u>\$10,544.7</u>	<u>\$11,944.7</u>
Subtotal:	\$109,142.9	\$109,142.9	\$110,542.9
<u>Pesticides & Toxics</u>			
Pesticides Program Implementation	\$13,114.6	\$13,114.6	\$13,114.6
Lead Grants	<u>\$13,712.2</u>	<u>\$13,712.2</u>	<u>\$13,712.2</u>
Subtotal:	\$26,826.8	\$26,826.8	\$26,826.8
<u>Multimedia</u>			
Pollution Prevention	\$5,999.5	\$5,999.5	\$5,999.5
Pesticides Enforcement	\$17,511.6	\$19,511.7	\$19,911.6
Toxics Enforcement	\$6,864.2	\$7,364.2	\$7,364.2
Indian General Assistance Program	<u>\$38,585.4</u>	<u>\$42,585.3</u>	<u>\$42,585.4</u>
Subtotal:	\$68,960.7	\$75,460.7	\$75,860.7
GRAND TOTAL:	\$745,000.0	\$880,000.0	\$884,957.0

Water and Air Infrastructure Financing

(dollars in millions)

	FY 1999	FY 2000
	<u>Enacted</u>	<u>President's</u>
Water and Air Infrastructure Financing		<u>Budget</u>
Clean Water State Revolving Fund (CWSRF)	\$1,350.0	\$800.0
Drinking Water State Revolving Fund (DWSRF)	\$775.0	\$825.0
Mexican Border Projects	\$50.0	\$100.0
Special Needs Projects	\$351.7	\$28.0
Clean Air Partnership Fund	\$0.0	\$200.0
TOTAL:	\$2,526.7	\$1,953.0

Water and Air Infrastructure Funds

EPA's Clean Air Partnership Fund and Water Infrastructure Financing request totals \$1,953.0 million. Funds in these programs support three goals in 2000: Clean Air, Clean and Safe Water, and Reducing Cross-Border Environmental Threats.

Clean Air Partnership Fund

In 2000 the Administration is launching an investment of \$200 million for the Clean Air Partnership Fund – a program that provides financing for smart, multi-pollutant control strategies that will reduce air pollution as well as greenhouse gases, and provide healthy clean air to local citizens as soon as possible. Funds will be for projects demonstrating simultaneous early reductions in smog, soot or air toxics, as well as greenhouse gases.

Recognizing that cost restraints often play a part in businesses and municipalities investing in short-term, single pollutant strategies, the Clean Air Partnership Fund will encourage many industries demonstrate long-range comprehensive pollution reduction strategies. The Fund extends to electric utilities and the transportation sector, and

grants will be made available to states, local governments, and tribes.

Water Infrastructure Financing

EPA's water infrastructure financing efforts support two of EPA's strategic goals: Clean and Safe Water, and Reducing Global and Cross-border Environmental Risks. With significant needs over the next 20 years for wastewater infrastructure alone, the Nation's cities are faced a major price tag for keeping our rivers, streams, and beaches free from untreated sewage. Vast quantities of pollution contaminate residential areas and wildlife habitats along our border with Mexico. In Alaska native villages, more than 20,000 households lack even the most rudimentary 20th century sanitation facilities and technology.

In hundreds of cities and towns, the systems for ensuring safe drinking water lag behind modern demands. In some cases, the costs associated with meeting national standards for drinking water quality ('maximum contaminant levels') have outstripped a community's investment in drinking water treatment and distributions systems. In other cases, aging and deteriorated systems need to be restored to ensure continued protection of public health.

Water and Air Infrastructure Financing

The State and Tribal Assistance Grants (STAG) Appropriation provides financial assistance to states, municipalities and tribal governments to fund a variety of drinking water, water, and wastewater infrastructure projects. These funds are essential to fulfill the federal government's commitment to help our state, tribal and local partners obtain adequate funding to construct the facilities required to comply with federal environmental requirements. States and localities rely on a variety of revenue sources to finance their environmental programs and to pay for the facilities needed to keep the water clean and safe from harmful contaminants.

Providing STAG funds through State Revolving Fund (SRF) programs, EPA works in partnership with the states to provide low-cost financial assistance to municipalities for infrastructure construction. SRF funds are also provided as grants to tribal governments to help them address their water, drinking water, and wastewater needs. Special Needs projects also provide focused wastewater grant assistance to local areas facing extraordinary needs.

The President's Budget requests a total of \$1,753.0 million in 2000 for EPA's Water Infrastructure programs, a decrease of \$773.8 million from 1999. Of the total water infrastructure request, \$1,653.0 million will support EPA's Goal 2: Clean and Safe Water, and \$100.0 million will support EPA's Goal 6: Reduction of Global and Cross-border Environmental Risks. The \$773.8 million decrease is the net result of a \$500.0 million reduction in the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs, a \$262.6 million reduction in 1999 Congressional earmarks, a

net \$61.1 million decrease for Special Needs projects, and a \$50.0 million increase for the U.S./Mexico Border Fund.

The resources requested in this budget will enable the Agency, in conjunction with EPA's state, local, and Tribal partners, to achieve several important goals for 2000. Some of these goals include:

- 91 percent of the population served by community water systems will receive drinking water meeting all health-based standards in effect since 1994, up from 83% in 1994;
- Another two million people will receive the benefits of secondary treatment of wastewater, for a total of 181 million.

Goal 2: Enhancing Human Health through Clean and Safe Water

Capitalizing Clean Water and Drinking Water State Revolving Funds

The Clean Water and Drinking Water State Revolving Fund programs demonstrate a true partnership between states, localities, and the federal government. These programs provide Federal financial assistance to states, localities, and tribal governments to protect the nation's water resources by providing funds for the construction of drinking water and wastewater treatment facilities. The SRFs are two of the Agency's premier tools for building the financial capacity of our partners. The President's 2000 Budget provides a total of \$1.63 billion for the SRFs within the STAG Appropriation, a net decrease of \$500.0 million from 1999.

Water and Air Infrastructure Financing

Capitalizing the CWSRF

As part of the President's environmental initiatives, the Administration will continue to capitalize the CWSRF, which has almost \$16.0 billion in capitalization grants for the 50 states and Puerto Rico, or almost 90 percent more than originally authorized by Congress (the program was scheduled to end in 1994). Through this program, the federal government provides financial assistance for wastewater and other water projects, including nonpoint sources, estuaries, stormwater, and combined sewer overflows. Water infrastructure projects contribute to direct ecosystem improvements by lowering the amount of nutrients and toxic pollutants in all types of surface waters.

In 2000, the President is requesting \$800.0 million for the CWSRF. This \$550.0 million decrease from 1999 will have a limited impact on this fund that now has approximately \$27.0 billion in assets. The 2000 CWSRF request, combined with future requests, will still allow the Agency to meet its long-term capitalization goal of providing an average amount of \$2.0 billion in annual financial assistance.

Using the CWSRF to Address the Highest Priority Threats to our Waters

Pollution from nonpoint sources is the largest cause of water pollution. In order to better address the Nation's most pressing water quality problems, the Federal government needs to provide incentives to encourage more SRF resources to high priority non-point projects.

In the Clean Water Action Plan (CWAP), EPA committed to continue its

work with states to increase the number and dollar amount of loans made through the CWSRF for priority projects to prevent polluted runoff. In 2000, the Agency is proposing to allow states the option to reserve up to 20 percent of their annual CWSRF capitalization grants to provide grant funding for implementation of non-point source and estuary management projects. Projects receiving grants assistance must, to the maximum extent practicable, rank highest on the state's list of prioritized projects eligible for funding assistance. Grants may also be combined with loans for eligible projects to help communities which might otherwise find loans unaffordable.

Capitalizing the DWSRF

In 2000, the President is requesting \$825.0 million for the DWSRF, which is an increase of \$50.0 million over 1999. Through the DWSRF program, states will provide loans to finance improvements to community water systems and to restructure small systems so that they can achieve compliance with the mandates of the Safe Drinking Water Act (SDWA) Amendments. Some non-state recipients, such as the District of Columbia and the tribes, will receive their DWSRF allocations in the form of grants. The DWSRFs will be self-sustaining in the long run and will directly help offset the rising costs of ensuring safe drinking water supplies and assist small communities in meeting their responsibilities. The Administration's goal for the DWSRF is for the fund to provide an average of \$500.0 million in annual financial assistance.

Supporting Alaska Native Villages

Water and Air Infrastructure Financing

The President's Budget requests \$15.0 million for Alaska native villages for the construction of wastewater and drinking water facilities to address very serious sanitation problems. EPA will continue to work with the Department of Health and Human Services' Indian Health Service, the State of Alaska, and local communities to provide needed financial and technical assistance.

Assisting Needy Communities

The President's Budget requests \$13.0 million for the construction of wastewater treatment facilities for Bristol County, MA, and New Orleans, LA. Funds are targeted to these areas because of special circumstances including financial hardship and unique sewer system problems.

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

The President's Budget requests a total of \$100.0 million for water infrastructure projects along the U.S./Mexico Border -- an increase of \$50.0 million from 1999. The goal of this program is to reduce the incidence of waterborne diseases and enhance water quality along the Mexico border. The communities along both sides of the Border are facing unusual human health and environmental threats because of the lack of adequate wastewater and drinking water facilities. EPA's U.S./Mexico Border program provides funds to support the planning, design and construction of high priority water and wastewater treatment projects along the U.S./Mexico Border and for wastewater projects.

Trust Funds

(dollars in millions)

	FY 1999 Enacted Budget	FY 2000 President's Budget
Response	\$1,005.2	\$1019.4
Enforcement	\$145.0	\$147.8
Management & Support	\$122.6	\$132.5
Other Federal Agencies	\$175.0	\$152.2
<i>Transfers:</i>		
IG	\$12.2	\$10.8
R&D	\$40.0	\$37.3
Total Discretionary:	\$1,500.0	\$1,500.0
Superfund Orphan Share (Mandatory)	--	\$200.0
Superfund Total:	\$1,500.0	\$1,700.0
Workyears:	3,752.5	3,663.5
LUST:	\$72.5	\$71.6
Workyears:	85.8	86.8
TRUST FUNDS TOTAL:	\$1,572.5	\$1,771.6
WORKYEAR TOTAL:	3,838.3	3,705.3

SUPERFUND

In 2000, the President's Budget requests a total of \$1,500.0 million in discretionary budget authority, \$200.0 million in mandatory budget authority and 3,663.5 workyears for Superfund. The 2000 Budget provides \$1,019.4 million and 1,530.8 workyears for Superfund cleanups and redevelopment of Brownfields sites. Superfund clean-up addresses public health and

environmental threats from uncontrolled releases of hazardous substances. To help address Brownfield sites, which are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination, the Agency will empower States, communities, and other stakeholders in economic redevelopment to work together in a timely manner to assess,

Trust Funds

safely clean up, and sustainably reuse Brownfields.

The 2000 President's Budget requests \$147.8 million and 1,206.4 workyears for the Superfund Enforcement program. The Agency will continue its efforts to obtain potentially responsible party (PRP) response actions to ensure that responsible parties cooperatively contribute their equitable share toward cleaning up Superfund hazardous waste sites. Where PRP negotiations fail, the Agency will either pursue enforcement action to compel PRP cleanup or use Trust Fund dollars to remediate sites.

In 2000, there are several other functions funded in the President's Budget. For instance, the President's Budget requests \$132.5 million and 558.4 workyears for Management and Support activities to perform Agency-wide resource management and control functions including budget development, budget utilization, financial accounting and fiscal operations. The President's Budget requests \$152.2 million for our Federal Agency Partners. The Agency works with several Federal agencies to perform essential services in areas where the Agency does not possess the specialized expertise. The Agency for Toxic Substances and Disease Registry (ATSDR), National Institute of Environmental Health Services (NIEHS), Department of Justice (DOJ) receive 93% of Superfund resources allocated to other Federal Agencies. The President's Budget requests \$52.4 million and 224.9 workyears transferred to the Inspector General for program auditing and to Research and

Development for innovative cleanup technology testing.

LUST

The 2000 President's Budget requests \$71.6 million and 86.8 workyears for the Leaking Underground Storage Tank (LUST) program, a decrease of 1% in resources and an increase of 1.0 workyear over 1999. Approximately 85% of this will be used for state cooperative agreements and support for tribal cleanup. The highest priority, over the next several years will be to address the backlog of 168,000 cleanups (as of September 1998) yet to be completed. In FY 2000 the Agency's goal is to complete 21,000 cleanups under the supervision of EPA and its State, local, and tribal partners.

21st Century Research Fund

The President's Budget proposes the establishment of the *21st Century Research Fund* to demonstrate the Administration's commitment to science and technology and to enhance high-priority civilian research and development activities.

BACKGROUND:

- ◆ This Fund supports key environmental and research programs, and promotes stability and growth for the highest priority research efforts.
- ◆ EPA's entire research and development program and the Climate Change Technology Initiative are included in the *21st Century Research Fund*.
- ◆ The Fund includes major research and development performed by Federal agencies and includes National Science and Technology Council initiatives.

21st Century Research Fund

(dollars in millions)

	<u>FY 1999</u> <u>Enacted</u>	<u>FY 2000</u> <u>Pres Bud</u>
<i>Goal 1: Clean Air</i>		
Attain NAAQS for Ozone and PM	\$75.7	\$69.1
Reduce Emissions of Air Toxics	\$19.7	\$20.6
<i>Goal 2: Clean and Safe Water</i>		
Safe Drinking Water, Fish and Recreational Waters	\$47.7	\$41.5
Conserve and Enhance Nation's Waters	\$19.5	\$20.0
Reduce Loadings and Air Deposition	\$8.4	\$8.7
<i>Goal 3: Safe Food</i>		
Reduce Use on Food of Pesticides Not Meeting Standards	\$6.4	\$6.6
<i>Goal 4: Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems</i>		
Safe Handling and Use of Commercial Chemicals & Microorganisms	\$11.2	\$11.5
Healthier Indoor Air	\$2.8	\$0.0
<i>Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response</i>		
Reduce or Control Risks to Human Health	\$48.4	\$41.5
Prevent, Reduce and Respond to Releases, Spills, Accidents or Emergencies	\$6.6	\$7.2
<i>Goal 6: Reduction of Global and Cross-border Environmental Risks</i>		
Climate Change	\$16.7	\$22.8
<i>Goal 7: Expansion of Americans' Right to Know About their Environment</i>		
Enhance Ability to Protect Public Health	\$11.5	\$12.9
<i>Goal 8: Sound Science, Improved Understanding of Environmental Risk and Greater Innovation to Address Environmental Problems</i>		
Research for Ecosystem Assessment and Restoration	\$111.4	\$118.5
Research for Human Health Risk Assessment	\$50.3	\$56.2
Research to Detect Emerging Risk Issues	\$49.2	\$42.3
Pollution Prevention and New Technology for Environmental Protections	<u>\$76.6</u>	<u>\$55.4</u>
Office of Research & Development	\$562.3	\$534.8
Climate Change Technology Initiative	\$109.5	\$216.4
Total	\$671.8	\$751.2

<p align="center">Environmental Protection Agency Summary of Agency Resources</p>
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(dollars in thousands)

<u>Agency Programs by Goal</u>	<u>FY 1999 Enacted</u>	<u>FY 2000 President's Budget Request</u>	<u>FY 2000 – FY 1999 Difference Total Dollars</u>
1 Clean Air	\$536,368.0	\$522,058.8	(\$14,309.2)
2 Clean & Safe Water	\$941,589.7	\$898,369.2	(\$43,220.5)
3 Safe Food	\$67,546.4	\$78,583.2	\$11,036.8
4 Preventing Pollution	\$237,789.8	\$277,166.0	\$39,376.2
5 Better Waste Management	\$234,501.5	\$245,433.5	\$10,932.0
6 Global and Cross Border	\$179,366.9	\$307,414.2	\$128,047.3
7 Right-to-Know	\$131,153.5	\$141,834.1	\$10,680.6
8 Sound Science	\$341,660.5	\$316,162.6	(\$25,497.9)
9 Credible Deterrent	\$304,466.8	\$316,086.2	\$11,619.4
10 Effective Management	\$516,658.9	\$578,982.2	\$62,323.3
Subtotal Operating Programs:	\$3,491,102.0	\$3,682,090.0	\$190,988.0
5 Better Waste Management	\$1,421,412.0	\$1,411,286.0	(\$10,126.0)
7 Right-to-Know	\$2,313.7	\$2,765.0	\$451.3
8 Sound Science	\$5,335.7	\$5,584.8	\$249.1
9 Credible Deterrent	\$14,923.5	\$15,248.8	\$325.3
10 Effective Management	\$128,515.1	\$136,671.4	\$8,156.3
Subtotal Trust Funds:	\$1,572,500.0	\$1,571,556.0	(\$944.0)
1 Clean Air	\$0.0	\$200,000.0	\$200,000.0
2 Clean & Safe Water	\$2,476,750.0	\$1,653,000.0	(\$823,750.0)
6 Global & Cross Border	\$50,000.0	\$100,000.0	\$50,000.0
Subtotal Water and Air Infrastructure Financing:	\$2,526,750.0	\$1,953,000.0	(\$573,350.0)
GRAND TOTAL DISCRETIONARY:	\$7,590,352.0	\$7,206,646.0*	(\$383,706.0)
Superfund Orphan Share (Mandatory)	--	\$200,000.0	\$200,000.0
GRAND TOTAL BUDGET AUTHORITY:	\$7,590,352.0	\$7,406,646.0*	(\$183,706.0)
BOND AUTHORITY:			
BETTER AMERICA BONDS	\$0.0	\$1,900,000.0	\$1,900,000.0

* Does not include a \$20 million offset for user fees.

<p align="center">Environmental Protection Agency Summary of Agency Resources</p>
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<u>Agency Programs by Goal</u>	Workyears		FY 2000 – FY 1999
	FY 1999 Enacted	FY 2000 President's Budget Request	Difference Total Dollars
1 Clean Air	1,762.3	1,802.6	40.3
2 Clean & Safe Water	2,495.1	2,522.0	26.9
3 Safe Food	702.4	712.2	9.8
4 Preventing Pollution	1,124.9	1,117.9	(7.0)
5 Better Waste Management	1,213.3	1,219.5	6.2
6 Global & Cross Border	522.4	519.9	(2.5)
7 Right-to-Know	708.6	741.9	33.3
8 Sound Science	1,184.9	1,178.0	(6.9)
9 Credible Deterrent	2,475.1	2,461.0	(14.1)
10 Effective Management	2,357.3	2,380.4	23.1
Subtotal Operating Programs:	14,546.3	14,655.4	(109.1)
5 Better Waste Management	3,103.6	3,026.6	(67.0)
7 Right-to-Know	12.2	12.4	0.2
8 Sound Science	9.3	9.3	2.5
9 Credible Deterrent	79.3	79.1	(0.2)
10 Effective Management	633.9	622.9	(11.0)
Subtotal Trust Funds:	3,838.3	3,750.3	(78.0)
1 Clean Air	0.0	0.0	0.0
2 Clean & Safe Water	0.0	0.0	0.0
6 Global & Cross Border	0.0	0.0	0.0
Subtotal Water and Air Infrastructure Financing:	0.0	0.0	0.0
GRAND TOTAL:	18,384.6	18,405.7	31.1

