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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS FOR 2003

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON VA, HUD, AND INDEPENDENT AGENCIES

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NOTE: Under Committee Rules, Mr. Young, as Chairman of the Full Committee, and Mr. Obey, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

FRANK M. CUSHING, TIMOTHY L. PETERSON, DENA L. BARON, JENNIFER MILLER, and JENNIFER WHITSON, *Staff Assistants*

PART 7

ENVIRONMENTAL PROTECTION AGENCY

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PART 7

ENVIRONMENTAL PROTECTION AGENCY

Printed for the use of the Committee on Appropriations

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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS FOR 2003

TUESDAY, MARCH 12, 2002.

ENVIRONMENTAL PROTECTION AGENCY

WITNESSES

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ROMONA TRAVATO, DIRECTOR, OFFICE OF CHILDREN'S HEALTH PROTECTION

CHAIRMAN WALSH'S OPENING REMARKS

Mr. WALSH. Good morning. The subcommittee will come to order.

Good morning, Administrator Whitman. Today we will continue our fiscal year 2003 budget hearings by taking testimony from the Environmental Protection Agency on its 2003 budget submission. For fiscal year 2003, the agency has requested $7,723,600,800, a decrease of nearly $459 million from the adjusted fiscal year 2002 appropriated level. I have used the word "adjusted" in the context of this comparison for three reasons: First, the final enacted 2002 level includes, by EPA accounting, nearly $502 million of congressionally-mandated priority spending matters.

Although these Congressional priorities represent just a little over 6 percent of the entire EPA appropriation, it is no surprise that these have been excluded from the 2003 request. One could say that the decrease for 2003 is due entirely to this fact alone. Second, a little over $183 million was provided to EPA in the supplemental portion of the 2002 defense appropriation bill for security and counterterrorism-related matters, some of which is not expected to be a recurring cost.

The 2003 request, in fact, includes some $128 million for Homeland Security-related matters, a reduction of over $54 million below the 2002 appropriated level.

A third final adjustment deals with the addition in the budget request of just over $107 million for the accrued costs for legislation proposed by the administration and employees pension and health benefits. While I expect the issue of whether or not the Congress approves this legislative proposal will be determined at a later time, and undoubtedly at an appropriations-wide basis. For the purposes of a fair apples-to-apples comparison between 2003 and 2002, I have included in the final 2002 enacted level mention about the equivalent costs of this proposed legislation.

Testifying before the committee this morning, and again this afternoon, will be EPA's very able administrator, former New Jersey Governor, Christine Todd Whitman. Madam Administrator, we welcome you back.

As you are aware, our schedule leading to markup of the 2003 appropriations bills has been tightened considerably, making it very difficult to schedule more than one day for this hearing. I am sure you are very disappointed that we won't be going more than one day. Nevertheless, you now have a year of service under your belt, and I am sure that we can have a very productive session today.

As a housekeeping matter, I would just like to note that because there are no votes until after 6:30 this evening many of our members will be flying into Washington today from their districts and may arrive late during the morning session or into the afternoon. When they do arrive, I will make every effort to recognize them as quickly as possible so that all members will have the opportunity to participate fully.

With the indulgence of my colleagues, I would like to begin this morning with a few more general comments. First, I would note that EPA's 2003 budget request is not only well-conceived, but perhaps the most realistic budget document we have seen for the

agency in at least 8 years. While it is far from perfect, it includes, after all, only executive branch earmarks and no legislative earmarks. There seems to be a trend there, and it is disappointing to see that recurring throughout the appropriations budget, and there has been a lot of discussion, particularly about the Army Corps of Engineers budget. It will be an issue for us, a very serious issue.

But it does include significant funding for many Congressional priorities. To mention just a few of these, the Brownfields program is proposed for $200 million. The 1-year-old Beach Grant program for $10 million, and the Section 319 Nonpoint Source Pollution Grant programs for $238 million; the Endocrine Disrupter Research program for $12 million; and the Great Lakes program for $15,128,000. All of these funding levels are at or above the 2002 appropriated level.

Perhaps more significant than any other program request is the fact that you have asked for a very realistic $1.212 billion for the Clean Water SRF program tells me that you are more interested in presenting and pursuing a responsible budget than you were in playing silly budgetary games with Congress.

This committee and the Congress will obviously make some changes in the document that you have presented to us. Nevertheless, I would submit that you have made our job just a bit more difficult by submitting a budget that we will be challenged to find great fault in.

Madam Administrator, you and your agency are to be commended. In the same vein, I would like to take this opportunity to publicly thank you as well as your fine staff for the excellent and most difficult job you did in decontaminating the Hart Senate Office Building following the anthrax exposure last fall. The local media so often focused on this problem or that problem, this person's complaint or that person's complaint, they missed the real point, that the Hart Building is not only large; it is an extremely complex structure.

EPA undertook and accomplished, in relatively short order, something that no one had ever done before. If I may signal out two key players in this effort, all of us should thank Mr. Richard Rupert, EPA's on-scene coordinator, who literally gave up months of his life to move to Washington in order to take on this challenge; and Mr. Tom Voltagio, EPA region 3's deputy regional administrator, for the countless hours they and their team spent to undertake this incredible task. They, every bit as much as our military forces and police and firefighters and paramedics in New York City, at the Pentagon and elsewhere around the Nation, are, in my opinion, the true heroes of the war on terrorism.

Finally, I would like to take a moment to comment on unfair, and I think totally erroneous, allegations made recently through the media that Administrator Whitman and the agency have been backing away from proper enforcement of the Clean Air Act through actions taken on the New Source Review program. The facts by themselves would seem to put this ridiculous notion to rest.

Since January 2001, the agency has issued 87 information requests to power plants, refineries and other facilities for specific pollution data required under section 114 of the Clean Air Act.

They have issued 22 notices of violations or findings of violation under section 113 of the Clean Air Act.

They have filed and concluded, administratively and otherwise, 7 violation cases and conducted numerous other miscellaneous enforcement actions using the many authorities provided by law. But I do not wish to speak for the Agency or the Administrator on this or any other matter. It is, I believe, incumbent on us to not allow erroneous, and perhaps in this case, malicious accusations to linger without being challenged. This is an issue which the Subcommittee has followed for quite some time, and, I might add, not necessarily in agreement with the Agency on how they have interpreted the scope of what constitutes a New Source Review under the law.

Rather than trying to somehow subvert the law, I believe the Administrator has done nothing more than tried to reach out to industry in an attempt to negotiate solid, statutorily consistent, environmental results rather than drag folks immediately into court.

Should the soft touch not get the job done, I am quite certain, and the statistics I noted a moment ago bear this out. There will be no hesitation to take the administrative and legal routes. As the Administrator herself stated in her confirmation hearing a little over a year ago, 'I intend to use the carrot, but I won't throw away the stick.'

I hope this unfortunate and unnecessary diversion is put to rest so the Administrator and the Agency can continue to concentrate on the important environmental issues before them.

I thank you all for your indulgence and would like now to recognize my friend and colleague, the ranking member, the gentleman from West Virginia, Mr. Mollohan, for any remarks he would like to make.

RANKING MEMBER MOLLOHAN'S OPENING REMARKS

Mr. MOLLOHAN. Thank you, Mr. Chairman. Governor Whitman, welcome. I would like to join the chairman in welcoming you to the hearing this morning. First, let me congratulate you on the excellent work you have done under very trying circumstances in your first year on the job. I look forward to your testimony here today.

Last year, none of us knew the incredible challenges our Nation would be facing in the coming months. September the 11th added another dimension to EPA's mission to protect the public's health and safeguard the environment. I read your budget submission with interest, and am pleased to see the request for $127 million in new funding for homeland security. I will be interested to hear you talk about the lessons that have been learned from EPA's onsite work at the World Trade Center site, and the anthrax cleanup at the Hart Building and other locations in Washington, D.C.

Also, I am pleased to see that your proposed budget increases the funds available for Brownfields reclamation, providing $200 million. This will help meet the growing demand and is definitely a step in the right direction. Your budget proposal also provides $21 million for a new watershed initiative, which will target up to 20 watersheds around the country for improvement. Not only will this result in cleaner water, it will do so by building on the public/private partnerships that have proven so crucial in efforts to work

with stakeholders to restore the environment in my home State of West Virginia.

However, there are aspects of this budget that concern me: the cut in funding for the Clean Water State Revolving Fund, for example. The administration's budget proposes to cut it from $1,350,000,000 to $1,212,000,000. $500 million of congressionally-mandated water and sewer infrastructure projects are also cut out of your budget. We can argue about who has the best system for selecting projects, but we shouldn't use that disagreement as an excuse to cut funding for these critical purposes.

I look forward to working through these differences with you and working with the chairman as the process moves forward, and I look forward to your testimony here. Thank you. Thank you, Mr. Chairman.

Mr. WALSH. Thank you. Madam Administrator, it is now my pleasure to recognize you for your opening statement and the full text of your testimony will appear in the record.

ADMINISTRATOR WHITMAN'S OPENING REMARKS

Ms. WHITMAN. Thank you very much, Mr. Chairman, members of the committee. I am pleased once again to have this opportunity to discuss with you the President's budget request for the next fiscal year for the Environmental Protection Agency. The President's budget provides the Environmental Protection Agency with the funds EPA needs to efficiently and effectively carry out its mission to safeguard the environment and protect public health.

As you mentioned, Mr. Chairman, in your opening remarks, the President's total request for EPA for fiscal year 2003 is $7.7 billion, and I am just rounding. You have it—all the numbers there. This request is a $200 million increase over last year's request. Overall, our proposed budget reflects the goals that President Bush and I share, leaving America's air cleaner, its water purer and its land better protected. I should also point out that EPA's proposed budget is part of the administration's record overall request of $44.1 billion for environmental and natural resources, the highest ever such request representing a $1.1 billion increase over enacted levels for the current fiscal year.

If I may, Mr. Chairman, I would like to discuss some of the highlights of our proposal, while submitting a somewhat more detailed statement for the record. In addition, I know there are some specific questions that members will have, and I look forward to having the opportunity to discuss those once we are finished with the formal statements.

First, almost half of our budget, as you know, goes for grants to State, local and tribal governments. This reflects our experience that many innovative, creative and effective environmental achievements are being made by State, local and county governments. As I have traveled around the country during the past year, I have seen some very exciting works in action, whether it is the preservation of additional land in the great swamp of New Jersey where Congressman Frelinghuysen and I had an event together, to the good work being done by Project Pride in Kentucky, the citizens down there, and in countless other communities across America. EPA is building strong partnerships for environmental success, and

the results speak for themselves. In this budget, we will build on those results to achieve even greater environmental progress.

Next, this budget more than doubles the funds available for Brownfield reclamation, providing $200 million. This money will lead to thousands of acres of better protected land in the years ahead. The success that so many communities have had in cleaning up our less challenging Brownfields will now be replicated in the more difficult sites, by cleaning up the more difficult sites that we find across the country.

We have also continued to ask for steady funding for the Superfund program at $1.3 billion. I should also point out that our request for Brownfields funding is, in addition to the Superfund request, not a part of it, a change from the practice in the past. Third, this budget provides important funding for the New Watershed Initiative, again, as the Chairman mentioned: $21 million to enable us to identify 20 of America's most challenged watersheds to work in partnership with the States and local communities to help restore and protect those precious acres.

This initiative will show the real results that partnerships can achieve, and how such partnerships can bring together existing programs in a united effort. That is an important aspect of what we are doing here with this proposal.

Nonpoint source pollution is a critical challenge that we all face. The watershed initiative fits into that, and we propose funding the Nonpoint Source Grant program at $238.5 million. As a result, this budget will help improve water quality for drinking, boating, swimming and fishing in the watersheds that we target.

There are numerous other important initiatives in our proposed budget. They include funding to increase the development of new technologies for environmental progress, funding for research that could lead to significant curtailing of animal testing by building on the discoveries from the human genome project and funding to increase our knowledge base about air quality challenges so that we can help save lives and prevent illness, such as asthma among America's children. In addition, the combined funding that we have proposed for the drinking water and Clean Water State Revolving Funds is the largest such combined request ever.

Of course, our budget request also includes significant new money to help EPA meet its homeland security responsibilities. $124 million in new funding we are requesting will support such important efforts as protecting the Nation's drinking water infrastructure, by funding vulnerability assessments in the Nation's water utilities, securing additional equipment and personnel to expand our ability to respond to biological attacks, and investing in research designed to enable the Nation to better detect and respond to chemical or biological attacks.

I am pleased to say, Mr. Chairman, that taken together, the President's proposed EPA budget for fiscal year 2003 fully supports the work of this Agency. It will enable us to transform EPA's 30-year mission to meet the challenges of the 21st century, and it brings us that much closer to realizing our goal of cleaner air for all Americans to breathe, purer water for all Americans to drink and swim and fish, and better protected land for all Americans to enjoy and cherish for the generations to come.

Thank you very much, and I would be pleased to answer your questions.

[The information follows:]

STATEMENT OF
GOVERNOR CHRISTINE TODD WHITMAN
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY

HOUSE APPROPRIATIONS
VA, HUD, AND INDEPENDENT AGENCIES SUBCOMMITTEE
HEARING ON
THE PRESIDENT'S FY 2003 BUDGET REQUEST

March 12, 2002

Mr. Chairman and Members of the Committee, I am pleased to be here to discuss President Bush's budget request for the Environmental Protection Agency (EPA). The President's budget provides the necessary funds for the Agency to carry out our mission efficiently and effectively – to protect human health and safeguard the environment. The FY 2003 request is $7.7 billion, which includes more than a 100 percent increase in funding for Brownfields, and significant increases for watershed protection.

I would like to begin, Mr. Chairman, by emphasizing that the President's budget request for EPA reflects the Agency's strong commitment to leaving America's air cleaner, its water purer, and its land better protected than it was when we took office. It promotes that goal in a manner consistent with our commitment to fiscal responsibility; by further strengthening our partnerships with state, local and tribal governments; by funding innovative new programs, and by strengthening existing programs that work.

I'd like to touch on a few of the highlights: nearly half of EPA's budget request provides funding for state and tribal programs, including almost $3.5 billion in assistance to states, tribes and other partners. The President and I both believe that much of the innovative, creative, and effective environmental progress being made comes from state, county and local governments and our budget request supports that.

As I have traveled around the country during the past year, I've seen some really exciting programs in action. From the people of Kentucky PRIDE to the members of the Paiute Tribe in Nevada, and in countless other communities across America, the EPA is building strong partnerships for environmental progress – and the results speak for themselves. In this budget, we will build on those results to achieve even greater environmental progress.

Homeland Security

I would like to thank the appropriators for recognizing the important role EPA plays in homeland security by providing $176M in the FY 2002 supplemental. Since September 11th, we have seen the traditional mission of our Agency – safeguarding the environment and protecting the public health – take on new meaning. We now play a critical role in preparing for and responding to terrorist incidents because of our unique expertise and experience in emergency preparedness and response to hazardous material releases. Our new role of supervising the decontamination of anthrax infected buildings has shown us that better information and new technologies are needed. To continue to do our part to ensure that the nation is prepared to respond to terrorist incidents, we are investing an additional $124 million for homeland security.

Included in this figure is $75 million for research in technologies for decontaminating buildings affected by bioterrorists attacks. We will provide guidance, technical expertise and support to federal, state and local governments in building contamination prevention, treatment and cleanup capabilities. Combined with resources provided in the Emergency Supplemental Appropriation Act of 2002, this represents a two-year total of $300 million in new resources. Also included in this figure is $20 million to address threats to the nation's drinking water supply. We, at EPA, play a significant role in working with state governments and local utilities to protect drinking water supplies. We have already begun working with states and local utilities to assess this vulnerability. The additional $20 million being requested in FY 2003 will augment $88 million appropriated as part of the Emergency Supplemental Appropriation Act of 2002. Together, these funds will ensure that utilities have developed a comprehensive assessment of these vulnerabilities and emergency operations plans using the most current methods and technologies.

Brownfields

Our FY 2003 budget more than doubles the funds available for brownfields reclamation by providing $200 million. This money will allow states, tribes, and local governments to build on the work they've already done in turning thousands of neighborhood eyesores into community assets. Despite that progress, thousands of brownfields still mar America's landscape. That is going to change. Thanks to President Bush's commitment to brownfields, this money will help us get at some of the most difficult brownfields challenges that remain. Those reclaimed brownfields will provide their communities with new jobs, new places to play, and a new sense of optimism for the future.

Watershed Projects

By providing $21 million for a new watershed initiative, our budget will target up to 20 watersheds around the country for improvement – funding that will lead to millions of gallons of purer water in the years ahead. This initiative will allow us to build on existing public-private partnerships to restore and protect up to 20 of America's most threatened watersheds. When I visited Boston last year and saw first-hand the excellent work done by the Charles River

Initiative, I knew we could use that effort as a model for other communities. I've heard a watershed defined as "communities connected by water." Well, with this initiative, we are connecting EPA with local watershed protection through the flow of federal dollars. As a result, we will help improve water quality for drinking, boating, swimming, and fishing.

National Environmental Technology Competition

Of course, underlying everything we do is our commitment to partnership. One of the most exciting new partnerships this budget seeks to build upon is our proposed National Environmental Technology Competition. Over the past 30 years, advances in technology have helped us address some of our most pressing environmental challenges. I believe technology can play an even greater role as we seek to achieve the next generation of environmental progress. That is why we are proposing $10 million for our National Environmental Technology Competition. This program will use competition to foster technological innovation through public-private partnerships. It will promote the development of new, cost-effective environmental technologies that will help clean the air, water, and land. For example, in FY 2003 EPA will solicit proposals related to arsenic removal in drinking water. This work will help further EPA's commitment to help fund, through research and development, cost effective methods of arsenic removal for small systems.

Cleaner Air

Under the Clean Air Act, we continue work to make the air cleaner and healthier to breathe by setting standards for ambient air quality, toxic air pollutant emissions, new pollution sources, and mobile sources. In FY 2003, we will assist states, tribes and local governments in devising additional stationary and mobile source strategies to reduce ozone and particulate matter, and other pollutants. A key component to achieving the Clean Air Goal for all citizens is the request for over $232 million for air grants to states and tribes. In addition, EPA will continue to build upon its voluntary government/industry partnership efforts to achieve pollution reductions and energy savings. For example, as we continue our Energy Star Labeling and Building Program efforts, our goal is to reduce the emissions of greenhouse gases by more than 40 million metric tons annually, by 2010, while saving consumers and businesses an estimated $14 billion in net energy bill savings when using energy-efficient products.

Purer Water

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

- Protection from Drinking Water Contaminants. The FY 2003 request supports our coordinated efforts with the states and tribes to implement new health-based standards to

control for microbial contaminants, disinfectants and their byproducts, and other contaminants.

- Drinking Water State Revolving Fund. The Drinking Water State Revolving Fund (DWSRF) request of $850 million will provide substantial funding to states and tribes to upgrade and modernize their drinking water systems. At this funding level, EPA will eventually meet its goal of providing an average of $500 million annually in assistance.

- BEACHES Grants. This budget includes $10 million to support our implementation of the "Beaches Environmental Assessment and Coastal Health Act of 2000." The money will be provided in the form of grants to states to develop local monitoring and notification programs for coastal recreation waters.

- New Watershed Investments. Our $21 million Targeted Watershed Program is designed to support the need for additional funding for priority watershed restoration efforts. This request supports a range of water quality restoration tools to assist local communities in restoring their waterways. This Program would provide direct grants to watershed stakeholders to implement comprehensive restoration actions.

- Helping States Address Run-off and Restore Polluted Waters. The President's FY 2003 Budget provides significant resources to states to build on successes we have achieved in protecting the nation's waters, by providing states and tribes with grants to address polluted run-off, protect valuable wetlands, and restore polluted waterways.

- Clean Water State Revolving Fund. Our budget request includes $1.212 billion for states and tribes for the Clean Water State Revolving Fund (CWSRF). States receive capitalization grants, which enable them to provide low interest loans to communities to construct wastewater treatment infrastructure and fund other projects to enhance water quality. This investment allows our Agency to meet the goal for the CWSRF to provide $2 billion average in annual financial assistance over the long-term.

- Protecting Human Health along the U.S.-Mexico Border. This budget includes $75 million for water and wastewater projects along the U.S.- Mexico Border. These resources help our Agency to address the serious environmental and human health problems associated with untreated and industrial and municipal sewage on the U.S.-Mexico border.

Strong Science

The FY 2003 budget supports our efforts to further strengthen the role of science in decision-making by using scientific information and analysis to help direct policy and establish priorities. EPA will achieve maximum environmental and health protections through our request of $627 million for the Office of Research and Development to address both current and future environmental challenges. This Administration is committed to the incorporation of science into

regulatory decisions by having scientists participate early and often in the regulatory development process. The budget request supports a balanced research and development program that addresses Administration and Agency priorities, as well as meets the challenges of the Clean Air Act (CAA), the Safe Drinking Water Act (SDWA), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Food Quality Protection Act (FQPA), and other environmental statutes.

Environmental Information

In FY 2003, we will further our commitment to providing assistance to states and tribes to develop and implement the National Environmental Information Exchange Network. The goal of this program is to advance collaborative efforts to integrate environmental data between and among EPA, states and the Agency's other partners. The ability to easily exchange up-to-date, accurate information is critical to meet today's increasingly complex environmental challenges. The grant program has several components, each of which is aimed at building on the growing success of states and tribes in finding smarter alternatives to the current approaches for exchanging environmental data. The grants being offered include grants to enable states and tribes to re-engineer their environmental reporting; grants to demonstrate progress in developing a joint EPA/state National Environmental Information Exchange Network, and grants that challenge state or multi-state or tribal efforts to integrate environmental information.

As EPA works with states and tribes to develop the National Environmental Information Exchange Network, we will also continue to build and institutionalize a Central Data Exchange (CDX) – which will be EPA's focal point for securely receiving, translating, and forwarding data to EPA's data systems. In FY 2003, the CDX will service 45 states and an assemblage of 25,000 facilities, companies, and laboratories. By widely implementing an electronic reporting infrastructure, this infrastructure will reduce reliance on less efficient paper-based processes, thereby improving data quality, reducing reporting burden, and simplifying the reporting process.

Enforcement Grant Programs

Most of our nation's environmental laws envision a strong role for state governments in implementing and managing environmental programs. The FY 2003 request includes $15 million in a new grant program to continue to support state agencies implementing authorized, delegated, or approved environmental enforcement programs. These funds will continue to afford states a greater role in the enforcement of environmental laws and regulations.

This budget request will allow our Agency to continue to support the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs. We will provide information and technical assistance to the regulated community through the compliance assistance program to increase its understanding of all statutory or regulatory environmental requirements. The program will also continue to develop strategies and compliance assistance tools that will support initiatives targeted toward improving compliance in specific industrial and commercial sectors or with certain regulatory requirements.

Safe Food

The FY 2003 request includes $142.3 million to help meet the multiple challenges of the implementation of the Food Quality Protection Act (FQPA) of 1996 so that all Americans will continue to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA provides for the expedited registration of reduced risk pesticides to introduce alternatives to the older versions on the market. EPA implements its various authorities in a manner to ensure that farmers are able to transition – with a minimal disruption in production – to safer substitutes and alternative farming practices. Expanded support for tolerance reassessments will reduce the potential risks to public health from older pesticides. Reassessing existing tolerances promotes food safety, especially for infants and children, while ensuring that pesticides meet the most current health and safety standards. This budget request also supports FQPA-related science through scientific assessments of cumulative risk, including funds for validation of testing components of the Endocrine Disruptor Screening Program.

Summary

Taken together, the President's proposed EPA budget for FY 2003 fully supports the work of our Agency. It will enable us to transform the Agency's 30-year mission to meet the challenges of the 21st century. It brings us that much closer to realizing our goals of cleaner air for all Americans to breathe, purer water for all Americans to drink, swim and fish in, as well as safeguarding public health.

This concludes my prepared statement. I would be pleased to answer any questions that you may have.

Mr. WALSH. Thank you. We will proceed with questions now.

INDOOR AIR AND RESEARCH

I would like to begin my questioning this morning with a discussion of the importance of and the budget request for indoor environments. We all recognize that EPA has no statutory authority to regulate indoor air. Common sense dictates that the indoor environment each of us deals with on a daily basis contributes greatly to numerous health-related issues. Indeed, some of the studies indicate that Americans spend as much as 90 percent of their time indoors, where they are exposed to levels of certain pollutants far greater than those found out of doors. The fallout literally from the World Trade Center attack and the surrounding neighborhoods, homes and apartments, and the experience of the anthrax cleanup, have only emphasized the importance of the issues surrounding indoor air.

I am aware that the EPA's budget includes the objective to ensure healthier indoor air within its preventing pollution activity. Within that objective, some $40 million is requested for 2003, which I should note is an increase of $652,000 compared to fiscal year 2002. Of this $40 million-plus, $38.5 million appears to be available to carry out the agency's principal program strategy for indoor environments, which is to increase public awareness and increase partnerships.

Among the activities funded in this area are the children's indoor environments program, the indoor environment program for houses, schools and buildings, radon detection and education programs, and the radon and air grants made through the agency's STAG account. I am confident these are all fine programs, but my comments—and my comments should not be perceived as a criticism. Rather, I am trying to make the point that while significant funds are being spent to educate people about the dangers posed by indoor environments, precious little is being spent to conduct research aimed at detecting and resolving many of these indoor air problems. Of the $40 million provided in this area, just $1.7 million is proposed for research. An added complex to all this has to do with the very subject for which I praised you and your employees just a few moments ago, fighting terrorist attempts like anthrax which severely impact on indoor environments.

It seems to me that among other things, we should be doing significant research aimed at developing building defense systems for chemical and biological attacks. I was approached just last week by a group who have developed a consumer-sized sensing system for water, but not for air. Unfortunately this also appears to me to be missing in the EPA's budget submission. Other similar research areas that seem to be missing as well might include the development, evaluation and demonstration of advanced indoor environmental quality technologies. The more advanced understanding of air, heat, moisture and contaminant transport within buildings. The indoor environment impacts resulting from air and contaminant flow around homes and buildings and the interaction of indoor air quality, thermal comfort, lighting and acoustic quality, and the effect that these have on human health and productivity.

Madam Administrator, I would not ask you to respond at this time to each of these suggested research areas, although you may wish to or you may wish to do so at a later time in the record. Rather, I would ask whether you agree that we are not doing enough in this area of indoor environmental research.

Ms. WHITMAN. Well, Mr. Chairman, we have a number of different research actions or research programs underway right now aimed at understanding the health effects of indoor pollutants and reducing the risk of those contaminants. That research is across the board. It is not always focused solely on indoor air. Sometimes we are looking at the contaminant itself and what the long-term health impact is of that. It may not appear as being just an indoor air quality problem, because we are looking at biological contaminants, particulate matter, volatile organic compounds. There are 13 research labs across the country with which EPA works. We have our own labs, and we also contract to ensure that we are focusing on what you have identified as—and we believe are also very important issues.

We do need to get a better understanding of, I believe, how we put together a program on indoor air to meet the kind of challenge that we faced at the World Trade Center. As you may know, the Office of Homeland Security has formed an inter-agency building air protection work group, of which the EPA is a member, that is directed to do—precisely the kind of research you were talking about, to meet those individual challenges. But as you pointed out, we also have, and are doing, a lot of work on children's health risk. We are focusing on the long-term health effects of biological contaminants found in the indoor air environment and what we can do to prevent them. The Indoor Air Quality tools for schools program that you talked about and the education program are all a part of making people aware of what they can do to reduce their exposure.

We have a pollution prevention research program that we are funding to develop tools to characterize and prevent emissions of biological contaminants from indoor sources. Again, focused primarily on indoor air. We have a particulate matter research program. I would be happy to take the list that you enumerated and get back to you on all of those, because I don't know all of them off the top of my head, but suffice it to say that we do have a very robust research part of the Agency.

In fact, research and sound science are the very core of the Agency. Without that we cannot make the kinds of decisions and determinations that we are required to make. So we are very sensitive to that issue, and are looking for ways to continually ensure that sound science is integrated at the onset of any decision-making process and to make sure that the research that we are doing is the very best that can be done.

[The information follows:]

INDOOR AIR QUALITY TECHNOLOGY RESEARCH

EPA conducts research on indoor air quality as a component of several larger multi-disciplinary research programs. These programs include efforts aimed at understanding: (1) the sources of indoor pollutants; (2) levels of pollutants people are exposed to indoors, particularly sensitive sub-populations; (3) health effects associated with indoor pollutants of concern (biological and chemical); and (4) techniques

to reduce risks from indoor contaminants. Specific areas of research include studies to better understand the sources, causes and options to mitigate childhood asthma; research to better understand the impacts of biological and chemical indoor pollutants on human health; and research to understand the relationship between outdoor and indoor pollutant concentrations and quantify exposures.

Additionally, as part of the FY 2003 President's Budget Request, $75 million is proposed for Homeland Security research. EPA plans to work collaboratively with other federal agencies and the private sector on better ways to detect and contain biological and chemical warfare agents and bulk industrial chemicals in buildings, and research to improve techniques to decontaminate buildings once a contaminant has been introduced, and evaluate safe disposal of residuals. The Agency will also pursue an aggressive program to transfer all available and new information to those who would need to respond to any future building contamination events. Selected research activities to be pursued include development, testing, and verification of detection devices (technologies will be developed and evaluated for rapid detection and measurement of contaminants to support pre- and post-clean up monitoring and assessment, worker protection, risk assessment, and early warning of contamination events), studies to understand dispersal of biological and chemical contaminants in and around buildings, air cleaning/filtration and decontamination of rooms and HVAC ducts, chemical and physical methods for decontamination of indoor surfaces, risk assessments of decontamination methods, assessment of conditions for safe incineration and disposal of residuals, field testing of new approaches by first responders, and tools for rapid assessment of risks on site.

AIR QUALITY: LOWER MANHATTAN

Mr. WALSH. Given the intensity of the experience we have just had relating to indoor air, I have spoken with Congressman Nadler, whose district encompasses the World Trade Center neighborhood and Assembly Speaker Sheldon Silver, whose constituency also is just to the south of the World Trade Center. They have grave concerns about the health of those neighborhoods, and it would seem to me anyway, that this would be an ideal time to focus that research more—rather than to shop it out to 13 different centers. I am just not aware of a focus on it or more intensity to that research because of the experiences we have just seen.

Ms. WHITMAN. Well, that certainly is a point that I have actually just discussed yesterday with our Office of Research and Development. There is a great deal more we do need to know. We need to figure out the best ways to do it. We do have a specific task force that we have called together for lower Manhattan. I would just hasten to use this opportunity to add that we have taken over 10,000 air samples in lower Manhattan and in the environs.

We have been very cognizant of the concerns and the needs of the citizens, and we recommended from the very beginning that people who went back into their homes that contained a great deal of dust, get professional cleaners, and understand that they need to continually clean with a heightened sense of attention, using the HEPA vac and the wet wipe. We have been working very closely with the City of New York in providing that information to citizens and to businesses in lower Manhattan. We have looked and done the air quality sampling. ATSDR did some sampling and found that the indoor air quality did not show significant elevated levels to cause concern of asbestos in the air or the other particulate matter.

In dust, however, they did find some elevated levels, and that would, again, bring us back to the point that we have been making continuously, which is, you need to clean in an appropriate way, and in fact you probably should get professional cleaners in when

you first go back into a home. But as far as your concern of concentrating the work done on the research, I would be happy to work with you on that and have our science advisor, once we get him confirmed, work with you on that as well.

Mr. WALSH. We can't help you there.

Ms. WHITMAN. Oh, you have lots of influence.

Mr. WALSH. Maybe we can.

Well, if we could find a way to make sure that your other research priorities were met and work with you to provide some resources for this more focused research on indoor air quality, would you be willing to advocate and support that?

Ms. WHITMAN. I am certainly willing to work with you to see what makes the most sense. I would have to bow to the advice of the scientists of the Agency, because they are the ones who know best how to maximize the research that we are getting, and I am not a scientist. I would have to go with them.

Mr. WALSH. Thank you.

Mr. Mollohan.

BROWNFIELDS CLEANUP

Mr. MOLLOHAN. Thank you, Mr. Chairman. Governor Whitman, the budget includes a doubling of funding for Brownfields cleanups to implement the new law passed in September, the total goes from $98 to $200 million, an increase for which you are to be commended and for which I suspect most Members of Congress will be enthusiastic, given the extent of the problem with pollution at industrial sites in many of our communities, certainly in my Congressional district.

Can you tell us how the newly expanded program will work and, in particular, how funds will be allocated to the States and to individual projects by EPA?

Ms. WHITMAN. We are in the process now of finalizing how to move forward with the program and how we are going to work with the States on these various programs. $50 million in the funding will go to the States themselves. We have a grant competition that we anticipate an outreach and support of the Brownfields, there are a number of activities that we will be undertaking that include the programs themselves and the administrative expenses.

We are looking to work with the States to help identify those Brownfields that are the ones that can be most readily addressed through the monies that we are going to be providing them. They will have the opportunity to establish their programs to determine how they want to address Brownfield challenges in their States. We are going to have $50 million to fund new functions and activities that will be created with this budget, revolving loan funds that will be managed by the State, funding of insurance mechanisms to provide incentives for cleanup, additional funds for targeted Brownfields site assessment.

We are going to be working very closely with the States in providing them the technical assistance they need to better do the assessments, and we look forward to seeing a very robust program here.

Mr. MOLLOHAN. You said $50 million was to go to the States themselves. There is a requirement in the law that 25 percent of the funding is to go to petroleum cleanup.

Ms. WHITMAN. Right.

Mr. MOLLOHAN. How are you interpreting that 25 percent? What base are you operating off of?

Ms. WHITMAN. The 25 percent is off the $121 million that will be awarded in grants. The way we do it—the money that will actually go to the cleanups. The $30.3 million 25 percent of the $121 million.

Mr. MOLLOHAN. There is some disagreement about what that base ought to be.

Ms. WHITMAN. I know there are those who question, but this is the way that we have been doing it. That is kind of the traditional way that the agency has done it. That is off the money that actually goes in the grants.

Mr. MOLLOHAN. How will the petroleum program work?

Ms. WHITMAN. Well, for the first time, the public law now allows the cleanup of the petroleum sites within Brownfields area in conjunction with Brownfields assessment and cleanup. There would be $30 million a year if the $200 million is appropriated. For the first time this will allow us to get at things like gas stations, which form a bulk of the Brownfields, and allow for the liability protection as well as providing additional dollars to the States to be able to address these issues.

Mr. MOLLOHAN. So how is it going to work? Is it a formula program to the States?

Ms. WHITMAN. It is not a flat amount. It will be similar to the way that we have done Brownfields to date. It is modeled on the Brownfields program that we have had as a part of the Superfund program, which has been very successful as far as it has gone. We don't anticipate any dramatic changes to the current Brownfields program, because, as I say, that has worked well. What we have here, though, is an expansion of authority to these petroleum sites that we were not able to get at before. Of course, there is the liability protection, which I feel is going to be, in fact, the most important part of this program, because it will allow for more private sector dollars to come into play here. The $30 million will be competitive for the petroleum.

Mr. MOLLOHAN. Be competitive——

Ms. WHITMAN. Competitive applications.

Mr. MOLLOHAN. That will be run out of EPA, not out of the States.

Mr. WALSH. Could you please identify yourself for the record?

Ms. HORINKO. Marianne Horinko, assistant administrator for——

Ms. WHITMAN. Assistant administrator for Solid Waste Emergency and Response.

Ms. HORINKO. The Brownfields program will include $50 million that will go to the States, to develop their programs to provide liability protection and technical assistance for both petroleum and nonpetroleum sites. It is a general $50 million and will be a formula grant to the States for all Brownfields sites. Of the $121 mil-

lion in grant money, 25 percent will be specifically earmarked for tank sites, and so communities and other eligible potential recipients will submit applications, much as they do now. We will have a competitive process for awarding those grants, but 25 percent will be specifically earmarked for underground storage tanks.

Mr. MOLLOHAN. And run out of EPA.

Ms. HORINKO. Yes.

Mr. MOLLOHAN. And the $50 million to the States, is that for administration?

Ms. HORINKO. That will actually be for States to primarily strengthen their voluntary cleanup programs. The law contains a bar on EPA taking enforcement action where the States have actually developed voluntary cleanup programs that oversee Brownfields cleanups, and we feel that a critical part of making the law successful is ensuring that States have robust voluntary cleanup programs that really have the muscle to run programs that can oversee Brownfields cleanup.

So this $50 million is really capacity building for State programs to oversee Brownfields so that we can feel confident that when States take action and declare a Brownfields clean, that these are good robust programs.

Ms. WHITMAN. And some of that money will also be used, won't it, Marianne, to help them identify their Brownfield sites and to assess those sites?

Ms. HORINKO. That's right.

Ms. WHITMAN. The funds can be used to determine the amount of pollutant, the type of pollutant that they are facing, because that will have a big impact on potential use, future use of that site.

Mr. MOLLOHAN. How did you decide how much money to put into the petroleum cleanup part of the program?

Ms. HORINKO. I believe the 25 percent was a formula in the law.

Ms. WHITMAN. It was formula driven.

Mr. MOLLOHAN. I know it is, but how did you decide which base to use?

Ms. HORINKO. We consulted with our Office of General Counsel, and they indicated to us that using this $121 million base is consistent with the way similar set-asides were interpreted in the Clean Water Act programs. I believe a similar approach is used in the Clean Water Act Revolving Loan Fund and other big grant programs. So it is consistent with the way we do business in other parts of the agency.

Mr. MOLLOHAN. Thank you. Thank you, Mr. Chairman.

Mr. WALSH. Thank you. Mr. Frelinghuysen.

ANTHRAX CLEAN UP

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Governor Whitman, good morning. Let me echo the sentiments and remarks of Chairman Walsh and ranking member Mollohan in terms of the work of your EPA staff, not only here in Washington, but the good people in Region 3 who were on the ground immediately after September 11th, and they are still on the ground doing important things to assure public safety and welfare, do the air sampling. Some have suggested that you haven't been vigorous enough, but from what I heard—and I know most of your people

from Region 3 live in the area, so they have a personal stake in helping, and this has taken a huge emotional toll, I know, on a lot of people. But I want to commend you and your staff for a lot of professionalism and compassion. If more needs to be done, we will support you.

Ms. WHITMAN. Thank you very much.

Mr. FRELINGHUYSEN. And then you add in the fact that our State appears to be the origin of this anthrax situation. A lot of time and effort has been spent, certainly, in tracking that down, but reassuring a lot of people that—who were handling mail that—it has sort of gone off the radar screen, but from your agency standpoint, it never goes off the radar screen. From what I can gather, the laboratories in your area harks back to the 1940s, and I have been told by your Region 3 administrator, that that might be worthwhile to do some more investment. The burden on your agency is huge, and you are dealing with a pretty antiquated situation.

I would also like to thank you, since you were good enough to mention in your opening remarks, for coming up to New Jersey to my district to assist—a big assist in transferring a Superfund site from one Federal agency to another. You would think we were trying to move the mountain here. You would think agencies would be able to cooperate, and I want to thank you and your staff for confronting the virtual paralysis which was associated with that site and for moving that transfer along and accomplishing it.

SUPERFUND REAUTHORIZATION

I would like to focus, if I could for a few minutes—I know in your prepared remarks, in your testimony, you highlighted Brownfields. Many of us are concerned about the future of the Superfund program. So maybe starting with a budget, can you sort of review where we are going with Superfund? There is an issue of reauthorization. Where are we going in terms of the EPA's budget for Superfund?

Ms. WHITMAN. I would be happy to answer that, because I think it is very important. There has been a lot of discussion about what is happening with Superfund and some concern has been raised about the Agency's commitment to polluter pays as an approach. The budget is $1.3 billion, which as I mentioned earlier in my testimony, is exclusive of Brownfields. That $200 million for Brownfields is separate from the Superfund dollars and used to be part of it. So the $1.3 billion is exclusively for Superfund.

$593 million will come out of the trust fund this year for this year's budget, and about $700 million out of general revenues. We are continuing to see about 70 percent of the sites cleaned up by polluter with polluter paying. That is not the same as saying that 70 percent of the dollars, it is the sites, because some sites are more expensive, and in fact, it may be more than that or it may be less. The important thing is that we continue to see real results here. The problem we have—and I know it is one that you share—is that the number of sites that will be completed over the coming year has dropped.

That number, has dropped not so much because of money and the trust fund levels, reauthorization or nonreauthorization of the trust fund dollars, as the drop comes from a number of different

problems. I am very concerned about it. Some of them have to do with the fact that the most recent past history of Superfund has been focusing on sites closest to completion and completing those and not starting on some of the others. We find ourselves now in a position with a number of mega sites, very large, very polluted sites, that require a lot of attention and require a lot of dollars. That is slowing down the number of completions we think that we can achieve.

However, we are doing it—going as fast as we can. I have asked that a pipeline study be done, and Marianne is actually in charge of that. Within 3 weeks, she will have to do a study of how we move things through the pipeline. How are we targeting which are the most important Superfund sites? I mean, for instance, on a mega fund site, if there is one, part of it that is particularly hazardous to the surrounding community, should we clean that up first. Then, if the rest of it isn't so bad, stop and go to the other site where it is that intense?

We need to take a look at how we handle Superfund sites, whether we are doing it in the right way, and that should be ready to be submitted to me within 3 weeks. We also are going to launch a national dialogue with NACEPI on the future scope of the NPL and moving beyond construction completions to achieve more meaningful environmental outcomes.

SUPERFUND TAX

Mr. FRELINGHUYSEN. But the public perception in the newspapers is that somehow the administration is backing off from the notions that polluters pay. That is not the case.

Ms. WHITMAN. No. That is not the case.

Mr. FRELINGHUYSEN. They are somewhat forgetting the fact that the trust fund is running out of money, that Congress has enacted—because the taxes haven't been collected since December of 1995, to that—and we are not suggesting that those that have paid those taxes are polluters, but there is a certain percent of what you are using for revenue, which polluters are actually paying. Is there a dollar amount in terms of——

Ms. WHITMAN. $1.7 billion last year.

Mr. FRELINGHUYSEN. Well, in terms of what responsible parties are paying, is that the figure.

Ms. WHITMAN. $1.7 billion is what responsible parties paid last year.

Mr. FRELINGHUYSEN. I know that you and your predecessor, you more than your predecessor, have worked with Congress in terms of getting Brownfields legislation. What are we doing relative to working with authorizing committees on this issue in terms of requesting the renewal of the tax?

Ms. WHITMAN. The President did not include the renewal of the tax in the budget request this year. The feeling was that Congress has failed to reauthorize since 1995. We are continuing to fund Superfund at the same level as last year. And that is where the confusion comes in. People assume because the trust fund is winding down—I believe it will be at 28 million next year, which is—you know, we are going to have to find the money elsewhere. We have been——

Mr. FRELINGHUYSEN. Well, that elsewhere is the discretionary——

Ms. WHITMAN. Right. But that still doesn't go to the polluter pays principle. As I said, about 70 percent of the sites are continuing to be paid for by the responsible parties where we can identify them, and that is critical. The other money is spent on those sites that we call orphan sites; ones where we can't identify the responsible party or where the responsible party has gone bankrupt, and we have no way of getting to them.

So we look forward to working with Congress. There are obviously concerns about the Superfund program itself, and a need for another look at it. Reform of Superfund has been an issue that has been discussed for some time: liability, clearing up the liabilities, giving some liability protection there, understanding, whether school boards are liable when they have sites that are in Superfund areas, those kinds of things.

And I would be happy to work with Congress on how we move that forward. But right now, the important thing is to understand that the same amount of dollars are going to Superfund as have gone in the past. We anticipate continuing to move forward with cleanups, but we do recognize another problem that really is one of how we have identified these sites and how big the ones remaining sites are.

Mr. FRELINGHUYSEN. We have existing sites that need to be cleaned up, they need resources, and as you point out, larger sites appear to be identified and added to the list. And I may be speaking from the minority position, but we need to reauthorize the Superfund program. I think it is entirely appropriate.

Thank you, Mr. Chairman.

Mr. WALSH. Thank you, Rodney.

Mrs. Meek.

BROWNFIELDS PROGRAM: LIABILITY PROTECTION

Mrs. MEEK. Thank you, Mr. Chairman, and welcome back, Governor Whitman. Good to have you here.

Again, my favorite subject is Brownfields. Last year you promised this committee quite a few things about Brownfields, and guess what? You kept your promise. Thank you for that.

In my Congressional district, I have 19 Brownfields, and most of it is located in the older areas of my district. And very little is being done about them, and it also causes sort of a catch-22 when it comes to the utilization of community development block grant funds, which is used quite a bit in housing and other things, but we can't get developers in there, because of the problems with Brownfields. And everyone is concerned about rebuilding these neighborhoods, one at a time, but it is very difficult, because certainly developers would rather go into the suburbs where it is much easier, there is no problem with Brownfields there.

So you asked for an increase last year, and you just told us there is money in the program, and you also said we needed to pass legislation, which we did. So now I would like to know what can you do with such a small amount of money to—in the inventories phase, someone has asked about this. Will you be able to coordinate with HUD in terms of implementing a Brownfields program?

My major point is that we really need the Brownfields program to exist, particularly in the older urban areas.

Ms. WHITMAN. Congresswoman, I couldn't agree with you more.

Mrs. MEEK. Excuse me. I want to tell you your region has worked very closely with us.

Ms. WHITMAN. I want to say that that is one of the reasons why we had such strong support from the mayors across the country for the Brownfields legislation that you all passed, and we are very thankful for that.

Let me just put aside my EPA hat for a second and return to my previous job as a governor. I think the biggest, most effective thing in this Brownfields legislation, to address the needs that you have brought up, is the liability protection. There is never going to be enough money. It is not a question of the Federal Government paying for all the Brownfields cleanup, but as we certainly saw in New Jersey, we were aggressive in providing legislation at the State level to offer incentives and to provide some protection for developers. But we could never offer them the surety that Superfund liability wasn't going to come in on top of them.

You did that with this law. You give them that sense that they could move forward, and if they had not had any kind of involvement with the previous contamination and under certain very limited circumstances, if it didn't migrate into another site or on to a Federal site and pose an immediate health hazard, they would not be held liable. That is what is really going to free up the developers. There are a number of them now that have begun to develop expertise in the area of Brownfield sites cleanup. That has become their niche in the market, and with the kind of protection that Congress has now given them with the Brownfields legislation, I believe you are going to see a great deal.

Having said that, we have requested a doubling of the amount of money for the Brownfields program to allow us to engage with the States in technical assistance and provide them the money to help do the kind of assessment on Brownfield sites that they need to do.

TITLE VI: CIVIL RIGHTS ACT

Mrs. MEEK. Thank you very much. My next question has to do with Title VI, the Civil Rights Act, and some of the complaints that EPA has been receiving long before you got there, governor. And they are still there. They are areas in which we really need protection for our children in our community, because they are chosen as toxic waste sites, and your agency gives them permits. And these permits give them a chance to build on these toxic waste sites so that it creates a big problem for people, particularly people of color in neighborhoods.

Now, I know that these complaints have been here for years, and I am just asking you for some further insight as to which strategy are you going to use in trying to resolve some of these complaints, and hopefully it will get a little bit farther up on your priority list.

Ms. WHITMAN. Well, Congresswoman, I have to tell you, particularly since our discussion last year, it has been something that has been at the forefront and environmental justice for new programs is something that is taken into consideration by the agency any

time we make a decision. As of January the 31st of this year, the backlog of the Title VI cases had been reduced from 66 to 42. That is about a 36 percent reduction in those Title VI cases. On Title VII cases, we have reduced the backlog by 90 percent. While no decision on the merits have yet been issued, as a result of the task force operations that are underway, we expect to propose resolution on a number of the complaints in the next few months. We have assigned a task force to it. We have increased the staffing, the attention to this, and it has become a very high priority for the Agency. We are working hard to work our way through the issues that are involved in these various complaints.

ENVIRONMENTAL EDUCATION

Mrs. MEEK. Thank you. Now, in terms of environmental education, I don't think it was a good decision to move that from EPA and place it under the National Science Foundation. I don't think it will get the priority treatment that your agency gave it. Of course, I have a feeling it came from EPA—not from EPA, but from OMB, and I am not asking you that question, Governor. I just know that that should have been—remained under your agency, because that environmental education is so important to the children and to the people in the communities. And it is my understanding, Mr. Chairman, that it is going to stay under this committee anyway—Mr. Chairman?

Mr. WALSH. Yes?

Mrs. MEEK. I understand that environmental education is going to stay under the reaches of this committee. So I would just like to ask you to keep it in here when it comes here.

Mr. WALSH. I thank the gentlewoman. I have questions about that issue, too, and I agree that the program has been well run by EPA. We need to hear more about the issue.

Mrs. MEEK. Yes. Thank you. You heard that. That is a promise.

Mr. WALSH. I didn't promise anything.

Mrs. MEEK. Thank you very much.

Mr. WALSH. A promise is a promise if it is a promise.

DEEP WELL INJECTION

Mrs. MEEK. You have helped us with our deepwell injection in Florida. We are the only State with that kind of wastewater treatment. And it is becoming a little bit of a problem, but not enough for me to wave a red flag, but we want to continue to—it appears to me that there needs to be some kind of concentrated look at this, in that in Florida, some cities and municipalities and jurisdictions are using one way of treating that. Others use it another way. And it could become a problem. So if you will ask your research people to continue to look at the deepwell injection, it will help us tremendously, and I thank you very much.

Ms. WHITMAN. Congresswoman, on that, let me just say we expect to make the draft relative risk assessment report, which is a relative risk assessment of wastewater management operations for treated effluent in South Florida, available for public comment this Spring, and complete the assessment in the Summer of 2002. We published a proposed rule on July 7th of 2000, and we are looking forward to completing that for the Florida class 1 wells.

LEAD POISONING

Mrs. MEEK. Thank you. And thank you for your treatment of lead poisoning. That is a big problem in my district, and particularly among the poor communities and the children. I was pleased to read in your budget justification that some of your lead activities will lead toward a stronger contribution to eliminating lead poisoning of our Nation's children. I think that is a very worthwhile goal, and thank you.

Ms. WHITMAN. We definitely made that a goal, and it was a charge that I gave one of our advisory committees. That is an entirely preventable problem. We should be able to deal with lead poisoning as it affects our children and as it affects all of us.

I would like to just comment on the Star program——

Mrs. MEEK. Yes.

Ms. WHITMAN. It is being moved to the National Science Foundation to consolidate the educational programs, but the funding for the minority academic institutions still stays with us and will continue to stay within the Agency. I just wanted to clarify that for you.

Mrs. MEEK. Thank you. I yield back, Mr. Chairman.

Mr. WALSH. Thank you. Mrs. Northup.

Mrs. NORTHUP. Thank you, Mr. Chairman. Welcome——

Ms. WHITMAN. Administrator.

Mrs. NORTHUP. Madam Administrator. I want to say Secretary.

Ms. WHITMAN. We would love it if you could——

VEHICLE EMISSIONS TESTING

Mrs. NORTHUP. No. I have never quite understood the distinction, but clearly you—much of what your department does is of great interest to the people across this country and in my community.

There is a lot of focus these days in my community about the vehicle emissions testing program, and I think there is a lot of debate going on currently right now in our State legislature where they are actually being asked to take some actions, and a lot of misinformation. So I would sort of like to start with that and ask you several questions.

There is a strong belief in my county that improved air emission controls on new cars, that gasoline additives that have improved air emissions, and the local law that requires a minimal investment by older cars, has reduced the effectiveness and the benefit derived by the VET program, the vehicle emission testing program, to the point that the benefits no longer outweigh the time and cost. And I just wondered if you would tell me, what would happen if our State legislature eliminated the VET program entirely?

Ms. WHITMAN. Well, Congresswoman, in the Louisville area, they are now in attainment.

Mrs. NORTHUP. Yes, they are.

Ms. WHITMAN. Therefore, there is not a requirement that they implement that program. The requirement under the Clean Air Act is that they be able to show us a modeling plan that guarantees their continued attainment for a 10-year period. How they choose to reach that attainment is really up to their discretion, because

they are in attainment now, unlike some other areas, that unfortunately Congressman Frelinghuysen and I know it only too well. Of 21 counties in New Jersey, 18 were out of attainment, so we were told we had to have the enhanced inspection maintenance. But in Louisville, because they are in attainment, they don't have to. We are not enforcing that, except that under the Clean Air Act, they do need to be able to show a modeling plan that would show they can stay in attainment for the next 10 years.

Mrs. NORTHUP. So if the legislature cancelled the program, we would expect that our State would have to go back to the drawing board to—in a sense—enact a new SIP program, a State Implementation Program, that would capture the benefits that have been captured by the VET previously in order to stay in attainment.

Ms. WHITMAN. Exactly.

Mrs. NORTHUP. Would they have some time to do that? I mean, let us say the legislature canceled the program in the next 2 weeks. Federal highway dollars don't stop flowing in the next 2 weeks, do they?

Ms. WHITMAN. No, they don't. And I know Region 4 has been working closely with the legislators to try to work our way through this, working with the department—I don't know whether they are called the Department of Environmental Protection or the Environmental Quality Agency—but we have been working very closely with the State to try to keep them from getting into any kind of a situation where you would have an immediate negative impact. But clearly it is an issue. We are driven by the law; we can't put people at risk. We need to ensure that they can provide that certainty about keeping the air clean, and the better way from our perspective to do it would be to have the SIP plan reworked and have some indication prior to an elimination.

Mrs. NORTHUP. I think the problem is that they have not been able to get any cooperation with the State drafting a new SIP program. I mean, the truth is only Jefferson County cars, which Kentucky has 120 counties, that gives you an idea of how small a county is in a geographic area. So many of the people who commute to and from work into Jefferson County, which is the only county that has to have the testing, actually bring cars that are untested. So nobody else in the State particularly minds that Jefferson County has a vehicle emissions testing program. Jefferson County residents feel they are bearing the burden that should be more widespread. So I guess my question is if the legislature eliminated the vehicle emissions testing, then in a sense you would be calling upon the State. They would have to draft the time——

Ms. WHITMAN. We would give them time. We would not immediately impose the sanctions.

MOBILE 6

Mrs. NORTHUP. Okay. Let me ask you further, I understand that about one-sixth of the benefits we derive from all of the actions we took to get into compliance come from the vehicle emissions testing program. So that would be about 16 percent. There is a new model, MOBILE 6, that is coming out. To date, communities that have run the benefits of their current vehicle emissions testing under the

new model, do they get an increased number of credits or a decreased number of credits?

Ms. WHITMAN. I will get Jeff Holmstead, the Assistant Administrator for Air and Radiation to answer this question. This is too technical for me.

Mrs. NORTHUP. There is a new model we are going to be using at some point; is that correct?

Mr. HOLMSTEAD. That is correct, MOBILE 6.

Mrs. NORTHUP. Would we expect, based on communities that have already run this model based on their current VET test, do they get more credits or fewer credits for their vehicle admission testing based on the new model?

Mr. HOLMSTEAD. The model is highly specific on the mix in different areas. So I think we all need to understand that. But in general, the new test shows that cars are more durable and get better performance than we previously thought, which is good news. The bad news is it suggests that these sorts of vehicle I/M programs don't give you as much credit as we previously thought.

Mrs. NORTHUP. So if we get 16 percent of our sort of compliance credits right now, it is probable maybe that we would get fewer than that and we are going to have to put in place in the SIP program anyway, I take it, new initiatives to stay in compliance.

Mr. HOLMSTEAD. That is correct. We would certainly use the new MOBILE 6 model, in terms of looking at the benefit for these sorts of programs; but I think as you explained, the key thing now is that the State needs to have a maintenance plan. I think we are prepared to work very closely with the State to do that, whether it is some sort of I/M program or some other program that would get equivalent reductions.

VEHICLE EMISSIONS TESTING: IMPACT OF DROPPING PROGRAM

Mrs. NORTHUP. And I hope you will. I have to say that from my own experience, I have lived there through the entire time, I think that the VET program was very popular because it was very clear to all of us who lived in Jefferson County that our air needed to be cleaned up, and it is not just something you measure with highly technical equipment. You can see all the way downtown in my community these days in the middle of summer, and there is great support for the effects of this. The decrease in support is coming from the fact that more and more people's cars are passing. They are aware that they are paying a high price for their cars to get this improved equipment. They see more and more people coming, commuting into our county. It would be highly politically unpopular to get those counties to adopt a VET program, and it is becoming very unpopular, and so I am eager to know what our alternatives are and how we can responsibly address the very strong support for clean air with what is the best way to get there.

Let me ask you, I am aware that there are some communities and some States that have dropped their vehicle emissions testing, where have they gone to redraft their SIP program and capture the number of credits they need, not just so they stay in compliance with the EPA but so that they also have the clean air, which is the whole point of it?

Mr. HOLMSTEAD. There are a whole variety of things that States have done, though I can't tell you specifically for the areas where States have eliminated I/M programs, but there are other sorts of vehicle programs. There are fleet programs, that are retrofitting existing fleets of school buses. There are a lot of things that can be done.

Now, 16 percent or whatever the number is, is no small feat. And as you well know, I think the folks in your area have done an excellent job of looking for the kinds of programs and have been very effective in cleaning up the air. But there are a variety of things, and we would be quite happy to sit down with you or folks in the State to walk through the options that they might have to replace the reductions that they would lose if they were to eliminate the I/M program.

Mrs. NORTHUP. Have you all done any sort of cost-benefit analysis with any of the States that have dropped it, comparing what the total cost is for the VET program that was eliminated, with the cost that other entities are required to pay in order to absorb the responsibility for clean air?

Mr. HOLMSTEAD. I am sure we have, but I don't know off the top of my head how those programs stack up. One of the things that is difficult in looking at costs and benefits is looking at the cost to people just in the inconvenience of using up their time. And so when we look at the costs of our different programs, in some cases you can readily identify what the cost is and we can measure how much people have to pay for the programs, how much they have to pay to fix the cars that don't pass, but actually costing out the hassle factor is a hard thing to do.

Mrs. NORTHUP. Right.

Mr. HOLMSTEAD. I think we have made an attempt at that, and we would be happy to provide you with some estimates of the costs and benefits of this program compared to other programs that are available.

[The information follows:]

Vehicle Emissions Testing (VET) Program

EPA originally performed an extensive analysis of the enhanced I/M program as part of the initial rulemaking in 1992. The estimates of cost effectiveness at that time were based on the prevailing state of knowledge about vehicle durability, repair costs, program costs, and numerous other factors. The analysis factored in both fuel savings from I/M and the cost of inconvenience for motorists, as well as other variables. On a per-ton basis, enhanced I/M was estimated to cost from $500 to $1,500 for each ton of reduction, depending on the pollutant. This compared favorably to stationary source reductions, which were estimated at that time to cost around $5,000 per ton. I/M was therefore one of the most cost-effective control measures states could implement to improve air quality.

Since the early 1990s I/M has evolved considerably in such a way that earlier assumptions may no longer be applicable. For example, newer vehicles have proven to be more durable, i.e., staying cleaner longer than was previously estimated, leading to lower rates of deterioration and lower I/M fail rates. In addition, states have a great deal of flexibility in designing I/M programs. As a result, there are many variations in test type, model years covered, and other design parameters.

It is difficult to estimate the range of costs and benefits among the numerous state programs. However, two more recent efforts provide additional insight as to the value of I/M and the relative cost-effectiveness of other measures.

- The National Academy of Sciences (NAS) completed a study in July 2001 called "Evaluating Vehicle Emissions Inspection and Maintenance Programs." Although no new research on I/M effectiveness was conducted for the study, findings were developed based on existing research. As expected, NAS conclusions confirmed that I/M programs are achieving fewer reductions today than initially projected, because cars are more durable and because of program implementation issues. Nevertheless, NAS concluded that there is still a "great need for (I/M) programs that repair or eliminate high emission vehicles." The report is available at: http://www.nap.edu/catalog/10133.html?se_side.
- The Ozone Transport Assessment Group (OTAQ) initiated a state-run stakeholder process in the mid-1990s, which evaluated a multitude of stationary and mobile control measures to address the transport of ozone. Although their estimates of I/M costs were higher than EPA's original estimate and comparable to some stationary source measures (ranging from $550 to $8,200 per ton), the group nevertheless "recommended implementation of appropriate and effective vehicle emission inspection and maintenance (I/M) programs where required by the Clean Air Act." OTAG's final report, recommendations, and comparative findings of other control measures are found on the website at: http://www.epa.gov/ttn/rto/otag/finalrpt/

A multitude of choices and strategies (mobile and stationary) exist for areas

to achieve attainment of air quality standards. Redesignation policies are also flexible with regard to dropping I/M, as long as NAAQS are maintained and conformity requirements are met. However, comparing options and costs for alternative measures from one area to another is not easy, because local needs and characteristics vary considerably. For example:

- When Minneapolis was redesignated as attainment for CO and dropped its I/M program in 1999, fleet turnover and the utilization of clean oxygenated fuels was all that was needed to maintain the standard.
- Three areas in Florida were able to drop their I/M programs in 2000 after being redesignated as attainment for ozone and demonstrating that fleet turnover and certain stationary source measures were sufficient to maintain the standard.
- Other areas such as Denver have elected to keep I/M for maintenance purposes, but always have the option to demonstrate they can maintain clean air without the program.

Mrs. NORTHUP. You might just be interested in what has happened in my city, is some of the possible adjustments we could make to the VET that would make it less onerous; for example, having cars tested just every other year, or new cars not tested, has brought a suit from the company that does it, saying that reducing his income is something that county would have to make up those dollars. So you know, it is——

Ms. WHITMAN. It is not an unusual case, unfortunately. It depends on the contract. We have seen the same thing.

Mrs. NORTHUP. Well, the contract says if the district takes any actions. It is not clear if the legislature eliminated the program outright that there would be anybody required to meet those revenue expectations. Thank you.

Mr. WALSH. The gentlelady's time has expired.

Mr. Price.

RESEARCH TRIANGLE PARK FACILITY

Mr. PRICE. Thank you, Mr. Chairman. Governor, welcome back to the committee. I appreciate your testimony. I want to also extend a special welcome to your new chief financial officer, Dr. Linda Combs, who came to you from the Treasury Department, where she was Assistant Secretary for Management. But before that, as you probably know, she has a respectable North Carolina pedigree.

Ms. WHITMAN. I couldn't tell it from the way she speaks.

Mr. PRICE. Hard to figure. She was the education adviser to our Governor, she served on the Board of Education in Winston-Salem and was an executive for Wachovia Bank, so she is well-equipped for this new assignment and we welcome her as well.

Governor, can you give us an update on the status of your move into the new Triangle Park research facility? I think we are becoming close to getting finished with that. That is the culmination of quite a few years on the part of EPA and this committee, 9 years of appropriations on this committee, as a matter of fact. I have heard through the grapevine that you might be able to come down to the EPA facility for a dedication ceremony sometime soon, possibly as early as May, which of course would be a fitting observation of Environmental Science Month. We would love to see you do that, but in any case would appreciate an update on how things are going.

Ms. WHITMAN. Certainly. That is our target. I very much look forward to that. It is 96 percent complete. It is a 1.2 million square foot facility and we are very excited by it. Obviously the scientists are extremely excited about it. The occupancy on the campus currently is about 50 percent. We are moving into it incrementally, 1,000 of the estimated 2,000 RTP staff are in place, and we are hoping to have full occupancy by the first quarter of the next fiscal year. I am very hopeful that it will be a May time frame and I will be able to go down and cut a ribbon.

HAZARDOUS WASTE DISPOSAL BY ACADEMIC INSTITUTIONS

Mr. PRICE. Good. We will look forward to that.

Let me move on to the question of hazardous waste disposal by academic institutions, a special case under RCRA which I am sure

you are familiar with. In its fiscal 2001 report, this committee, directed EPA to participate in an initiative to demonstrate consensus best practices for managing hazardous waste in academic research institutions and asked you to report back to the committee with the results. The report by the participating academic institutions has been completed, and I understand that EPA's contribution is now pending at OMB.

The report from the academic institutions concludes that the industry-oriented regulations of the Resource Conservation and Recovery Act are in fact ill-suited for the academic research setting. As you know, part of the problem here has been that different EPA regional offices and different States seem to have significantly different interpretations of RCRA requirements for academic research labs. The report recommends that EPA clarify for its regional offices and for States and universities how much discretion exists under RCRA to permit the use of the performance-based best practices recommended in the report. It also recommends that EPA encourage the adoption of these best practices.

As I see it, there are two critical components to the best practices developed through the initiative. First, the environmental health and safety professional within the universities should make hazardous waste determinations as opposed to the individual lab workers. Secondly, these same professionals should be allowed to treat waste in order to eliminate their hazardous characteristics, thus reducing the overall volume of waste as opposed to simply disposing of the waste.

So that leads me to two questions. One, does EPA concur with the conclusions of the report that implementing the performance-based consensus best practices developed through the initiatives would in fact result in improved environmental stewardship that would exceed existing requirements while significantly reducing hazardous waste volume? And, secondly, is EPA planning to issue administrative guidance to regional offices and to States and to universities clarifying that many or all of the consensus best practices described in the report are compatible with RCRA regulations? Specifically, does EPA concur that this guidance should allow and encourage environmental health and safety professionals within universities to make the hazardous waste determination and to treat wastes, where possible, to eliminate their hazardous characteristics and to reduce their volume, reduce the volume that requires disposal?

If so, when will this guidance be issued?

Ms. WHITMAN. EPA supports developing effective alternatives for safely managing hazardous wastes at academic institutions. We believe that is entirely appropriate, and we are working closely with the stakeholders to develop a RCRA policy that reflects that need. We are also currently developing guidance that will address the specific concerns of academic institutions by clarifying EPA's policy pertaining to laboratory waste and operations. Of course we feel, as I think many people do, that one of the priorities should be waste reduction and recycling. And in fact, the Office of Solid Waste and Emergency Response in their Waste Reduction and Energy Recovery Initiative, to be announced in the very near future, will include how we can institute a performance-based approach to

reuse and recycle of laboratory chemicals. We take this to be a separate challenge, an important challenge, and we are addressing it as such.

Mr. PRICE. Do you anticipate that these best practices will or may require some regulatory changes?

Ms. WHITMAN. At this point in time, until we have addressed all the concerns that OMB had on the final report to be transmitted to the Congress, we are still working our way through that. I am not sure at this point in time whether we think we will require statutory change or not. We do not know that yet.

Mr. PRICE. Is there anything you would like to add about the problem that universities have encountered in terms of variations among the regional offices in their openness to some of these best practices and some of the differences between regions as to the inclination to require that the letter of the RCRA rules be followed?

Ms. WHITMAN. Well, Congressman, one of the challenges that we face at the Agency is sitting in Washington, establishing national models that are perceived to be the same, and must be the same, and implemented in exactly the same way everywhere. The standards for safety, what is safe for human health, what is safe for the environment are the same.

I am trying to allow the regions to have some flexibility in dealing with the particular challenges that they find in that region. However, when you are talking about universities and university laboratory settings, those are pretty standard. What they are dealing with, and what they have to address is pretty standard. We are looking right now at ways that I indicated to develop the kind of guidance that recognizes that they are different from other facilities where you have these kinds of chemicals and where you have this kind of activity going on, so that there is at least that recognition that the standards for what is safe to be put into the atmosphere and how we deal with chemicals is the same. How you address it when you are talking about a research institute and laboratory may be different than it is with a chemical company, with the manufacturer, and that kind of flexibility is going to be recognized.

Mr. PRICE. Right. The evidence is apparently that some of the best practices that are being developed in universities around the country do, in fact, offer more in the way of hazardous waste volume reduction than standard practices. In a situation like this, the flexibility or the variation among regional offices is seen as something of a threat in that what is developed in one region in the way of flexibility and a cooperative working arrangement might in another region be much more rigid, much less flexible; and the prospect of a change in administrators or change in administration could be seen by these best practices institutions as somehow threatening, and making it more difficult to work out ways of handling these wastes.

Ms. WHITMAN. Actually, the report I mentioned to you, the Waste Reduction and Energy Recovery Initiative, is going to be really a guidance document for the regions. That is why it is important that within that there be special recognition of the challenges to research universities.

Mr. PRICE. Thank you very much. Thank you, Mr. Chairman.

Mr. WALSH. Thank you. Mr. Goode.

TOTAL MAXIMUM DAILY LOADS STATUS

Mr. GOODE. Thank you, Mr. Chairman. First I would like to ask the Administrator about TMDLs, the same as last year. Can you give me the status of what you are doing on them?

Ms. WHITMAN. We are continuing to work hard to come up with an appropriate standard. As you know, we gave some extra time to the whole research that is going on and to the review. We are continuing to work on that. We have got a number of comments, thousands of comments.

Mr. GOODE. A lot from Virginia.

Ms. WHITMAN. Lots of comments on it, and we are working our way through those comments, which of course is required in rulemaking. So we are still in the process of trying to go through the comments and see how they impact on the proposed rule and what we need to do in order to ensure it is something that is workable and responds to the needs. It is one of the concerns I have that sort of goes to Mr. Price's question on a very different level: that we set one standard in Washington for everyone, but we have to be or should be cognizant of the impact and implementation on various parts of the country because it is very different.

Mr. GOODE. I would just ask that you continue to keep in mind there are a number of rural counties in Virginia that the levels of pollution in the water comes more from wildlife than anything else and that some of the nitrogen in the water comes more from the yards in Fairfax County for the Potomac than it comes from the farms in far western Virginia.

Ms. WHITMAN. And we are working very closely with Virginia's Department of Environmental Quality on how to address this issue. They have been, as you know, very vocal on this and have expressed some very legitimate concerns. We have been working very closely with them on addressing the issue, how to solve the problem of high-quality TMDL in less time and at less cost.

Mr. GOODE. With regard to the rules that were done by EPA shortly before you came on board, I would like to read this statement about my opinion: These rules should be reviewed, looking at cost-benefit analysis, impact on small business, impacts on States, impacts on energy supplies and whether there are options to achieve the same environmental goals in an easier, less costly manner and use of sound science. In my opinion, we don't need a whole new expensive Federal program set up when we can achieve the same goals more efficiently and less costly with existing programs.

Can you give me assurance that these last-minute rules which you encountered are going to go through a thorough regulatory review process before anything happens?

Ms. WHITMAN. Congressman, we are not planning to implement the 2000 rule. We intend to publish a new rule in the Federal Register, which we expect to have ready in late spring, mid-2002. We will take public comment on that proposal and promulgate a revised final TMDL rule in late spring of 2003. But we are continuing to enforce the TMDLs that are currently in place, because there is an ongoing TMDL program in place. So I don't want any

confusion on that. But we are not planning to implement the 2000 rule.

Mr. GOODE. Apart from TMDLs but just water rules in general, the same thing?

Ms. WHITMAN. It depends, obviously, on the rule. We are not going forward with all rules, but we are focusing through all of our efforts on water to try to find ways that recognize the economic impact of what we do and the fact that economic impact affects behavior. It has a way of having unintended consequences that may jeopardize people's health—the very thing we are trying to protect—if we don't understand all the consequences of a proposed rule.

Mr. GOODE. To switch back to the TMDL for a minute, in some of the counties in Virginia and I know in other States, we have a number of small dairy farmers, and some of these TMDL rules just kill them. And I mean, I for one like fresh fluid milk. I don't want powdered milk from another country, and I hope we will do all we can to work with the local dairy farmers.

Ms. WHITMAN. Congressman, as someone who drinks the milk produced by our New Jersey cows, I couldn't agree with you more.

Mr. GOODE. Mr. Chairman, I also would like to submit a few questions for the record and have the Administrator respond later, if that is all right.

Mr. WALSH. That is absolutely all right. Without objection.

Mr. GOODE. Thank you, Mr. Chairman.

Mr. WALSH. Mr. Hobson.

TREMONT, OHIO CITY LANDFILL

Mr. HOBSON. Governor, nice to see you. I have got a couple questions for you. Some years ago I had a hard time with a previous Administrator, getting her to look at a landfill in my district, and finally they began to look at it. You know, it is funny because usually Congress people try to keep the EPA out of their district this is one time when I tried to get them into my district. I finally got them into it, and I am pleased that Region 5 is making progress in evaluating the Tremont City landfill site.

In a public briefing held a few months ago, your regional staff and four of my constituents said all US EPA investigation activities are complete and the draft report is being prepared. On the enforcement side, I understand the EPA has identified the potentially responsible parties who dumped in the barrel fill, and you are working with them to begin the process of a remediation facility study. I must admit this process is taking quite a while, and we are on 3 years now, and I guess my main question to you is, what is the EPA doing to reduce the time and cost associated with the site characterization and site remediation activities? As I look at this chart that the EPA sends out, it will be 2036 before we really get anything completed in this, and I don't think the constituents want to wait that long to get this stuff done. And I know I am not going to be around, but the problem with this is this sits right over an aquifer in our community, and how it ever got sited here is beyond my dreams, but it did get sited, and I think we need to see how we can speed up the timetable on this. Do you have any thoughts on that?

Ms. WHITMAN. Actually the region expects that the PRP action will begin by 2005, that remedial action construction will start in 2005. And as you know, the landfill has been closed and those post-closure activities are being done by the PRP under the supervision of the EPA. So they are trying to make sure that the public is protected, but the actual remedial construction is due to start in 2005.

Mr. HOBSON. The only other comment I would make on this is there seems to be a continuing effort on the part of certain people to re-permit in this area, and I think we need to be very cautious about any re-permitting or permitting where there is an aquifer situation, because once the aquifer is damaged or penetrated, the costs and the ability—and this aquifer runs all the way down to the Dayton area, not only the Springfield region, but it could be immensely costly, and so I would hope that the State and the EPA all would continue to monitor this to make sure that we don't inadvertently do anything that would cause a problem here in the future.

Ms. WHITMAN. Absolutely.

PESTICIDE TOLERANCE FEES

Mr. HOBSON. I have one other question at this moment that I would like to ask about. It is in a totally different area, so I am switching on you. I see that the EPA anticipates collecting $59 million in pesticide tolerance fees in fiscal year 2003; however, you are only obligated to spend $15 million. Your budget justification states the remaining collection will be used at some future time. Since our farmers and consumers are the ones that will bear the increased cost of these pesticide tolerance fees, I am interested why the EPA would think it is in the best interest of the American people to collect $43 million more than necessary, and do you have any specific plans for spending this money in the near future?

Ms. WHITMAN. Congressman, I hadn't known that we had anticipated collecting that much in the tolerance fees. Steve, you are up on this. Steve Johnson, who is head of the Office of Prevention, Pesticides, and Toxic Substances.

Mr. HOBSON. We would all like to see money, but——

Mr. JOHNSON. Mr. Congressman, yes, the——

Ms. WHITMAN. It is a complicated fee structure, let me put it that way. There are a number of different fees.

Mr. JOHNSON. Yes, there are a number of fee issues. And right now the current statutory authorities that we are operating under and the President's budget anticipates a collection of tolerance fees, and there are two components to the tolerance fees. One, a fee is associated with new tolerances for new products coming on the market. Second, a fee is associated with reassessing of old tolerances. And current legal interpretation is that we are not only authorized but directed to collect fees for work that has been done, so-called retroactive work. I think it is an area that is still controversial. It is a legal issue that the Agency is currently evaluating. But, as the budget is currently constructed, you are correct that this $58 million does contain this retroactive fee. Those fees are then put into a revolving fund; so they are not, if you will, going by the wayside or being wasted, but there are——

Mr. HOBSON. Are you a lawyer?

Mr. JOHNSON. No, I am not.

Mr. HOBSON. You talk like one. I was worried we are going to get to the number there, whether the number was correct or not. See, I never admit I went to law school or I am a lawyer, because I lose votes when I do that. But what I am concerned about——

Mr. WALSH. It is on the record now.

Mr. HOBSON. I know it is on the record now. We have a camera here, too. I am just concerned that we have got money here that was set up, and now the consumer and farmers who will tell you they are having a tough time, and then you have got these fees that Virgil was talking about, that now the farmers are now complaining about because it is coming down to their streams where they have got to do all this. And I don't worry about these rotating funds or where that money goes. We will have to audit that, too, I guess.

I don't want to do that. I would like to see if we could look at the legislation and see if we have to keep taking that kind of money, because if I remember correctly, the subcommittee allocated $17 million in the 2002 pesticide reregistration and maintenance costs while prohibiting an increase in tolerance fees. And I guess you might have said this, but could you explain why the EPA, despite these past prohibitions, has allocated for an increase in the cost of these tolerance fees, if that is correct?

Ms. WHITMAN. Hope springs eternal. As you know, we haven't been allowed to collect those fees since 1999. The total cost of the fee is a question of what the program demands of us, our ability to review new pesticides, get them into the marketplace, available. Many times the new pesticides are less expensive for the farmers. They require less per application for the farmers, but we need to go through a process to ensure that they do what they say they are going to do. The pesticide fees are the way we fund the program, but we have not been collecting these fees, which is why I was a little thrown off by the extra money we would be getting. That one I hadn't heard because we have been prohibited from finalizing the rule. But we keep hoping, because we feel that that is the appropriate way to pay for the kind of work that needs to be done in order to get the newest and most environmentally protective pesticides on the market.

Mr. HOBSON. But you are going to get more money. You say 58, we say 59, but it is in that range.

Mr. JOHNSON. If we are authorized to allow us to begin collecting fees. Currently, right now, we are prohibited this year from collecting any tolerance fees other than the current level which is about $1 to $2 million per year. When the Food Quality Protection Act was passed in 1996, it required the Agency to collect the full costs associated with tolerance assessment, both for new and old. And so that means a major increase for a particular chemical company, for a major food use chemical, currently they pay about $30,000 for tolerance. That is less than one-twentieth of the actual costs associated with the Agency doing the assessment.

And so therein lies, in one sense, the difficulty; and so we continue to collect the $1 to $2 million, which is only a portion of the $30,000 per tolerance. The full cost is significantly more money and that is how that $58 million is derived. But as Governor Whitman

has said, we have not been authorized to collect any of those fees. The only ones that we have been authorized to collect is the $1 to $2 million per year at this point.

Mr. HOBSON. So basically in your budget you are anticipating that you might be authorized to begin collections; is that——

Mr. JOHNSON. That is correct.

Mr. HOBSON. Thank you very much. Thank you, Governor.

WASTEWATER TREATMENT PROCESS: ONONDAGA LAKE

Mr. WALSH. We will begin the second round, and I would like to use this opportunity to talk about a specific wastewater treatment process, and maybe we can get somebody within your staff to comment on it. But leading up to that, as you know, I have been very interested in the reclamation of Onondaga Lake, which is in my constituency, partially in the city of Syracuse. And as you know, I would love to have you come up and take a look at the project. It has been a very expensive project, but it has strong partnership from the State and the local government and with the private sector. Honeywell, which owns the former Allied Chemical site on the lake, is negotiating with the New York State Attorney General for a very substantial settlement, which would include remediating all the toxins, including mercury, that they put into the sediments in the lake and the environs. There has been no agreement on the sediments yet, but, as you know, the sediments can be a ticklish issue.

In any event, hundreds of millions of dollars are being spent to reclaim this very valuable resource and turn what was our community's greatest debit into its perhaps greatest asset. Because of the expenditure of public money to reclaim this resource, there has been a tremendous increase in private spending on the lake and the area around the lake. The lake, because it was so polluted and it is a Superfund site, never encouraged the development of the properties around the shoreline. So it is entirely encompassed by public property, which is really a marvelous development if you think about it, because it belongs to everyone in the community. So we are in the process of reclaiming it and trying to do an environmentally sensitive redevelopment of it, and it is a cause of great interest, if not pride, yet in the community.

But the point was, one of the aspects of this project is, as a CSO project, closing off combines through overflows in the two major streams that flow into the lake, one of them flows right through the city. So we are closing off CSOs and taking that wastewater that combines storm and sanitary sewers and treating it for pathogens and then putting it back into the creek.

There have been a number of proposals on technologies. One of them obviously is storage. And when you create storage, you can then wait until the storm subsides and the flow reduces, and then you can pipe it down to the Metro plant which is under major construction right now, about a $140 million construction plan to reduce nitrogen, phosphorus, to get it to clean water standards. The County believes that they can reach those standards.

But an interesting proposal was made to me by a local entrepreneur who has developed technology that I would like, if you could, to have one of your experts comment on it, and the idea is

you take this stored water which is primarily storm sewer runoff from snow melt or rainstorms that does mix with sanitary in large-volume events, and pump it out to a remote area. Actually, it would be on these former Allied Chemical wastebed sites. You can only do this in cold weather, by the way and Syracuse has plenty of cold weather. That is one thing we have lots of, and you have to have a certain temperature in order to make this work. But they run it through like, if you have ever been to a ski area, snow-making equipment, and there is apparently a filtration process along the way, just a very simple filtration process to remove most of the solids, and then you just run it through this atomizer. It is working in, I believe, Westport, Ontario which also has lots of cold weather. It may be one of the few advantages that the Northeast has over the rest of the country, lots of water, lots of cold weather. But in any event, this atomization process of the water destroys pathogens.

Just to comment—they are doing this, and I had my staff do some work on this, and I am going to review the memos. I haven't seen them yet—but just to comment if you have heard of this technology and what you think of it.

Ms. WHITMAN. I'll ask Diane Regas to speak to whether she has heard of the particular technology to which you refer or not. We are seeing many more innovative technologies coming to the fore to address a host of problems, particularly when you are talking about water, drinking water, wastewater. This is an area of real concern where a lot of investment is being made. We are very excited about that and trying to do as much as we can to move technologies forward. But Diane, I don't know if you have heard of this.

Ms. REGAS. Mr. Chairman, while I haven't heard of this specific technology, we would be very interested. We work with some of the challenges of dealing with combined sewer overflows, and the pure volume of water that can be contaminated because of combined sewer overflows or sanitary sewer overflows is of concern. You are absolutely right that pathogens is one of the major environmental concerns with those. So a lot of communities have tried innovative ways of dealing with them, and we would be happy to come up and take a look or visit with the folks who are coming up with this technology.

Mr. WALSH. Apparently it somehow separates out nitrites and phosphorus. So there is a residue because it creates a big pile of snow, obviously, and then as it dissipates in the spring, it leaves a residue. And what is neat about it if it works is that this area that I am talking about is a former waste bed site. It was a plant that broke down salt, NaCl, and created byproducts and industrial cleansers and so forth. But it very basic, alkaline. And this residue, it enriches this waste bed area and it becomes very fertile and you can grow grasses and plants and so forth. So it sounds great. It is almost too good to believe, and usually if it is, it is. But I would be very interested in having you take a look at it.

Ms. WHITMAN. Certainly. We would be happy to do that.

Mr. WALSH. Thank you. Mr. Mollohan.

Mr. MOLLOHAN. Thank you, Mr. Chairman. Governor, do you support the general principle that polluters should pay to clean up toxic sites?

Ms. WHITMAN. Absolutely.

Mr. MOLLOHAN. Last week in a television interview, you indicated that the reason for the use of general funds to pay for cleanups was Congress' failure to renew the tax. That statement left the administration's position on renewal somewhat vague, and the President's budget does not deal specifically with the tax question. In the budget documents submitted by OMB in February, however, there is a simple statement that, and I quote, "The budget does not propose reauthorization of Superfund taxes," end of quote. The statement was buried in staff papers, however, which may or may not represent the administration's policy.

I am asking you, can you tell us whether President Bush is opposed to extending the Superfund tax and, if so, why?

Ms. WHITMAN. The President did not include the reauthorization of the Superfund tax in this budget. That was based on two premises: one, that it had not been reauthorized since 1995 and the will of Congress seems to be that it not be reauthorized; and two, the feeling that it was time to move forward with what has been called for by a number of people, which is to take another look at Superfund to see what needs to be done, if anything, before reauthorization. Then to look and see exactly how we are funding the program to make sure that we have the right processes in place, that we are in fact targeting the right industries.

Things have changed since the Superfund tax was first imposed and there are two parts to that, as you know, but reauthorization was not included in this budget.

Mr. MOLLOHAN. Right. Understand, though, I am trying to take the measure of his attitude with regard to reauthorizing this tax, and the fact that the Congress has not initiated it doesn't dispose of the question of what is his attitude toward it. Has he requested a reauthorization of the tax?

Ms. WHITMAN. He has not requested a reauthorization of the tax.

Mr. MOLLOHAN. Does he intend to do so?

Ms. WHITMAN. You would have to ask OMB.

Mr. MOLLOHAN. OMB?

Ms. WHITMAN. Well, ask the White House or—all our budgets go through OMB to one point, but they go to the White House and that is a decision by the President.

Mr. MOLLOHAN. I understand. And you are intricately, I would imagine, involved in the process.

Ms. WHITMAN. The feeling at this time is that since Congress is disinclined to reauthorize the tax. The President saw that as an indication that there was some concern with the program, which he shares, and a desire to move forward with Superfund reauthorization, to take a look at Superfund to see what needs to be done to see what we can do about liability concerns, and what can we do to make sure Superfund is working in the way it was intended to work. Then perhaps at that time take another look at whether or not it is appropriate to reauthorize a tax of any sort.

Mr. MOLLOHAN. Have you made any recommendation to him on this issue?

Ms. WHITMAN. No, I have not.

Mr. MOLLOHAN. Do you have any recommendation for him on this issue?

Ms. WHITMAN. At this point I do not, until we see where Superfund is going to go overall.

Mr. MOLLOHAN. Well, the President is wonderful at providing leadership when he wants to provide leadership, bold leadership, as he has evidenced with regard to the war on terrorism. If he has any inclination toward reauthorizing this Superfund tax on polluters, which would evidence his embracing the principle as you have here, that polluters should pay, then he should provide that leadership by least making a request to Congress.

Ms. WHITMAN. Well, Congressman, I think the important thing, and one of the concerns that I know the President has had about the way the Superfund tax was imposed, is it is not all on polluters. It is on everyone in segments of the industry, and on the industry, so that even those who have the best of environmental records are also paying it.

Mr. MOLLOHAN. Calibrating that factor into a new authorization would be fine. But if we are unfairly taxing a few polluters, you must think it very unfair that the general public should pay through general revenues for these cleanups, which is what is going to be happening if we don't reauthorize legislation based on the principle that the polluters should pay.

Ms. WHITMAN. First of all, the principle that the polluter pays is still very much a part of the overall administration's approach, and that is why we are seeing that 70 percent of the cleanups are in fact done by the polluter, those who are responsible.

Mr. MOLLOHAN. We do have this reauthorization question facing us, do we not?

Ms. WHITMAN. We do. I wish I could say that the public didn't pay anyway, because even when it is a generalized tax, that very often is passed through to the public. The concern here is to ensure that the tax is going where it needs to go.

Mr. MOLLOHAN. I am sorry, I didn't understand what you said. Will you say that again, please?

Ms. WHITMAN. Yes. The Superfund tax was on everybody, including industries that have a clean environmental record. The other thing is just my cynical nature in saying that I know that companies have a way that, when they are required to pay certain things, they recoup those costs and it usually comes at the expense of the consumer, that one way or another we pay.

Mr. MOLLOHAN. But you strongly embrace the principal that polluters must pay.

Ms. WHITMAN. As does the President.

Mr. MOLLOHAN. I think there are probably a lot of folks who look forward to his leadership by requesting authorization to that end. Mr. Chairman, that is the end of my questioning for now.

Mr. WALSH. Mr. Frelinghuysen.

SUPERFUND SITE CLEANUP: RESPONSIBLE PARTIES

Mr. FRELINGHUYSEN. It might be not be advisable for me to follow Mr. Mollohan on Superfund, but I think the concern many of us have—and certainly from New Jersey—we want to get things cleaned up. And the question I always ask is what portion of the existing sites have responsible parties that have been identified that can help pay for the cleanup; and what percentage of the national identified sites have no, shall we say, responsible party, which therefore places the burden on the taxpayers?

And then there is this view, too—maybe this is just newspaper speculation—that the sites that are added in the future are sort of these megasites, and there are two that have been mentioned. I think one was a mining site somewhere.

Ms. WHITMAN. Libby, Montana——

Mr. FRELINGHUYSEN. Are there responsible parties there, or are those the sites that, too, the taxpayers are going to have to shell out the money?

Ms. WHITMAN. We are still hopeful on Libby, although the responsible party has entered into bankruptcy, which has been a pattern that we have seen emerging. It is still 70–30. Seventy percent of the sites are cleaned up by private parties. We at this point in time in our review of sites anticipate that in the future 70 percent of the sites will be cleaned up by the responsible party, and the remaining 30 percent then devolved back to the Agency or the taxpayer. 30 percent will be paid by the other revenues, whether we get our revenues from the General Fund of the Treasury, or as I indicated this year, some money we still have from the Superfund tax that will be used. That has been pretty consistent: about 30 percent of the sites are what we call "orphan sites" where we can't identify the responsible party, or that the company has gone bankrupt or disappeared or there is nobody there.

That is why I have called for the pipeline review. That is one of the reasons we are doing that in the NACEPT process. We need to make sure we are identifying sites correctly, and we are prioritizing them in the right way so we are getting at the right sites first. We need to be very mindful of public health, and ensure that we are doing everything as sophisticated as we need to be to ensure that we can identify the polluter.

We think we have done a pretty good job with 70 percent of them being paid for by the polluter, but clearly we would love to have 100 percent done by the polluters. It is just not going to be possible in all sites because contamination occurred so long ago.

METHYL TERTIARY BUTYL ETHER (MTBE)

Mr. FRELINGHUYSEN. I think a lot of what you have done is absolutely commendable in terms of expedited cleanups, holding people responsible, and certainly in areas where there is a density of population. Quite honestly, I am not sure how much population there is out in Montana and Nebraska, but for those of us in the Northeast we hope that the so-called garden varieties of cleanups still get your Agency's attention, and I am sure that will be the case.

Shifting gears, could you bring the committee up to date on what we are doing with this MTBE? I know that I read of some sort of

compromise in the Senate which involves ethanol, but the committee has focused here in the past on the whole issue of banning its use sooner rather than later because of the widespread of pollution of a variety of different water supplies and aquifers. And here again something sort of went off—it didn't leave my radar screen, but it sort of left the public's radar screen. Where do we stand? Where does the EPA stand?

Ms. WHITMAN. We have been very concerned about the migration of MTBE into water bodies. Fortunately, if there is any good news with it, the health concerns do not appear to be as significant as people would gain from the nastiness of the smell and the way it impacts the water. People certainly don't drink water with MTBE in it. And as you know from New Jersey, we have had a number of people that have indicated that they have felt health concerns, headaches and other allergic reactions, to the gasoline when MTBE has been added to it.

The Senate bill on energy does include a provision for the banning of MTBE, and the Energy Department has endorsed that bill. The administration's position has been to endorse that. Also I believe that that bill also eliminates the 2 percent oxygenate requirement for gasoline. That would be something else that the Department of Energy has endorsed.

NEW YORK/NEW JERSEY PORT DUMP-OFF: PEER REVIEW STATUS

Mr. FRELINGHUYSEN. Looking towards the port of New York and New Jersey, the infamous dump-off of the State, can you give me a brief update as to where we stand on that? I understand that there has been an ongoing peer review in terms of what is suitable for capping that 57 acres and that there has been a formal report in the making for some time, and I think last year you made mention that a draft proposal would be ready soon. I just wonder where we stand on the report. I understand that materials are being dumped, but that they are absolutely pristine and clear. So I am sort of looking for a higher level of reassurance of where we stand with this report.

Ms. WHITMAN. Region 2 is the lead on that, as you know, Congressman, and not headquarters. There has been an exchange of information that took longer than anticipated, there is no question about that, but the feeling is that that time invested was worthwhile. In January, EPA and the Corps of Engineers hosted a meeting with the scientific, peer reviewers of that. The human health scientific peer review is now underway, and we expect to initiate the ecological review this summer. So things are proceeding at the site.

Yes, you are right that material continues to be delivered, but that is material that has been deemed to be within the standards that are set for site and pose no threat to human health. The proposal for it was sent to the peer review panel in January of this year, so we are moving forward.

Mr. FRELINGHUYSEN. Mr. Chairman, I would like to amend my compliments. I am sure region 3 deserves some recognition, but I should have been referring to region 2 in my earlier remarks this morning. So if anyone felt insulted——

Ms. WHITMAN. Region 3 carried the burden for the anthrax.

Mr. FRELINGHUYSEN. Thank you very much.
Mr. WALSH. Thank you. I complimented region 3 earlier.
Mr. Price.

CLEAR SKIES INITIATIVE

Mr. PRICE. Thank you, Mr. Chairman. Governor, let me turn to clean air and the way the various clean air initiatives underway might intersect. A recent study in the Masthead, a medical research publication, linked ozone air pollution to actually causing asthma in children. A separate study published in the Journal of the American Medical Association links particulate pollution to causing emphysema and chronic bronchitis in adults. Another study recently published in the American Medical Association Journal concludes that long-term exposure to fine particles of air pollution, coal-fired power plants, factories, and diesel trucks is linked to an increased risk of dying from lung cancer.

Now, these studies underscore the proposition that air pollution directly affects the health of Americans, and despite the progress we have already made, we need to continue to press ahead. Can you update us on the status of the implementation of the 1997 ozone and fine particulate matter standards?

Ms. WHITMAN. We are continuing to move forward with those regulations. As you know, we went ahead with the diesel fuel and the lower sulfur content in gasoline and in fuel and the impacts, and we are continuing to move forward with those other regulations.

Mr. PRICE. It is sometimes confusing when you try to keep track of the regulatory activity and the judicial activity related to these regulations. In addition to these 1997 ozone and fine particulate matter standards, there are currently pending lawsuits challenging the current New Source Review enforcement policies. We are still in the midst of implementing the new ozone transport regulations. And the administration has now proposed a new initiative to reduce emissions of ozone, sulfur dioxide and mercury.

I wonder if there is anything you can tell us here today, but perhaps more expansively for the record, to help us understand whether and how all these pieces fit together. Would progress in one of these pending policy areas contribute to the resolution of conflict regarding other policies? For example, would the implementation of the 8-hour ozone standard require the kind of upgrades to older coal-fired power plants that are the objectives of the New Source Review enforcement policies? Alternatively, would the administration's Clean Air Initiative require some of the same kinds of pollution controls as the New Source Review enforcement actions-or the 8-hour standard for ozone? How far would the Clean Air Initiative go in reducing levels of ozone relative to the pending 8-hour standards?

The bottom line for how we proceed, it seems to me, is to ensure that we do not lose ground, that we do not stall our progress in reducing air pollution that clearly affects the health of Americans. Is the administration's intention, for example, to move any increased flexibility on the New Source Review requirements in tandem with legislative action on the clear air initiative or progress on the 8-hour standard? You get my drift?

Ms. WHITMAN. I do.

Mr. PRICE. There is an intersection here that I think is poorly understood, and as I said, it is a bit much to ask you orally to pick your way through all of this, but could you say what you can say now and perhaps supply for the record some sense of how and why we can expect that the net outcome of these different actions is going to be continued progress in cleaning up our air?

Ms. WHITMAN. Well, Congressman, you have touched on the nexus of all of the concerns that we have, which is under the Clean Air Act we have a number of individual requirements that are scheduled to come into effect. Some are in enforcement now. Others are regulations that are coming into place at different times, setting different standards for the various emissions from companies, and from power plants in particular. That is cumbersome, it is confusing, and it can be very expensive. That is why the President proposed the Clear Skies Initiative, which would ensure it sets mandatory targets now, with reductions now on all three Pollutants: on SO_2, nitrogen oxide, sulfur dioxide and mercury. Those would be mandatory caps. Based on the analysis that we have done, the targets they would, in fact, get us faster reductions in those three major pollutants at less expense than under the current Clear Air Act.

Having said that, nothing implies a rollback of the Clean Air Act. We do believe that we have a very real possibility of reducing the paperwork burden on some of these regulations when and if Clear Skies is, in fact, enacted by the Congress. It depends on where the levels are set, but as the President proposed, we would certainly say that New Source Review, as it applies to utilities, not to the other sectors but to utilities, would be redundant because we would be getting better reductions under Clear Skies than we would get under New Source Review.

We see a 70 percent reduction in these three pollutants, under what the President is calling for. By 2010, you would have a 25-million-ton reduction in SO_2, greater than you would get under the current Clean Air Act; a 10-million-ton greater reduction in NO_X than you would get under the Clean Air Act; and a 20-ton better reduction of mercury under the Clear Skies proposal than under the Clean Air Act.

Those are real numbers. A part of what we would need to do, when we get the final numbers is identify which of the regulations become redundant. It is not that you are in any way weakening the Clean Air Act or our commitment to achieving cleaner air. It is, in fact, endeavoring to do it faster at less expense to the consumer, because ultimately they pay whenever it costs a utility.

We are very hopeful that this program will allow us to capture these emissions reductions in a very efficient way and in a way that is even better than what we can expect to get under the Clean Air Act. We plan to move forward with a reassessment of all of the other regulations that we have in place that are geared to achieving standards, and lowering amounts of particulates that can be emitted or emissions that can be emitted into the atmosphere. This could do it faster.

Mr. PRICE. Would that same reasoning apply to the 1997 ozone and fine particulate matter standards, that we are going to either meet these goals or do better?

Ms. WHITMAN. This would certainly have an impact on particulate matter, and, again, what we are doing now is going back through and taking another look to make sure that we are comfortable that anything that we would recommend being alleviated, let us say, does not do so with any harm to the atmosphere. We are going to be looking at every one of the regulations that apply to clean air. Once we have the Clear Skies Act passed, once we have standards and we know what the standards are, then we will be able to look at all those other regulatory programs that are designed to capture these particular emissions and see whether or not we need to continue along the same regulatory path that we are on today.

Mr. PRICE. To the extent that analysis is available before these hearings——

Ms. WHITMAN. Certainly.

Mr. PRICE. [continuing]. Go to press, I would appreciate any further elaboration of those assurances that you might be able to furnish for the record.

Ms. WHITMAN. Is there Anything else you wish to add?

Mr. PRICE. Thank you.

Ms. WHITMAN. We would be happy to do that.

Mr. PRICE. Thank you.

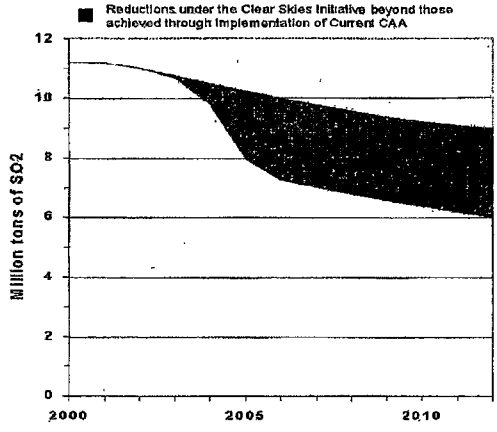
[The information follows:]

Projected SO_2 Emissions from the Electric Power Sector

•**Greater reductions, faster, and with more certainty**: Compared to the current Clean Air Act, the President's initiative will reduce SO_2 by 25 million tons over the next decade.

•This chart shows EPA's projections of the SO_2 emissions reductions that would be achieved from power plants over the next decade under the current Clean Air Act (CAA) and under the President's Clear Skies Initiative. Projections beyond 2012 are more uncertain for the following reasons:

•Under the Clear Skies Initiative, EPA would be required, before 2010, to review new scientific, technology, and cost information and adjust the Phase II (2018) caps if necessary to meet clean air standards.



•Under the existing Clean Air Act, States and EPA will be required to impose new regulations on many sources of SO_2, including power plants, in order to meet new federal standards for fine particles and to improve visibility in national parks. These new regulations will reduce SO_2 emissions from power plants, although the bulk of these reductions are expected to take place after 2012. The exact timing and magnitude of these reductions are also highly uncertain.

•The Clear Skies Initiative would get substantial reductions in SO_2 emissions much earlier than they could possibly be achieved under the CAA. Furthermore, if States need to get additional emissions reductions beyond those mandated under the Clear Skies Initiative, the CAA would continue to require the States to get those reductions and to provide States with a number of regulatory tools to do so.

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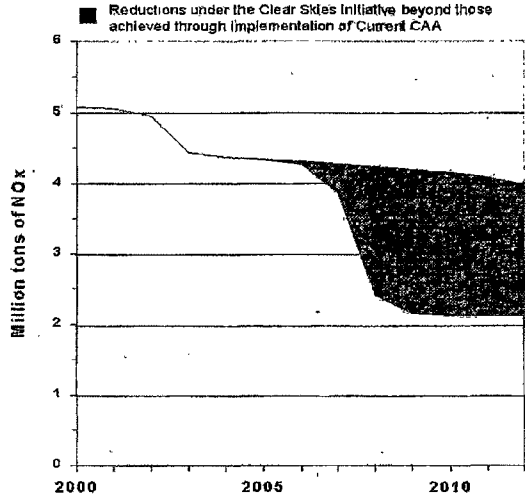
NOx Emissions Under the Clear Skies Initiative

•**Greater reductions, faster, and with more certainty**: Compared to the current Clean Air Act, the President's initiative will reduce NO_X emissions by 10 million tons over the next decade.

•This chart shows EPA's projections of the NO_X emissions reductions that would be achieved from power plants over the next decade under the current Clean Air Act (CAA) and under the President's Clear Skies Initiative. Projections beyond 2012 are more uncertain for the following reasons:

•Under the Clear Skies Initiative, EPA would be required, before 2010, to review new scientific, technology, and cost information and to adjust the Phase II (2018) caps if necessary to meet clean air standards.

•Under the existing Clean Air Act, States and EPA will be required to impose new regulations on many sources of NO_X, including power plants, in order to meet new federal standards for ozone and fine particles and to improve visibility in national parks. These new regulations will likely reduce NO_X emissions from power plants, although the bulk of these reductions are expected to take place after 2012. The exact timing and magnitude of these reductions are also highly uncertain.



•The Clear Skies Initiative would get substantial reductions in NO_X emissions much earlier than they could possibly be achieved under the CAA. Furthermore, if States need to get additional emissions reductions beyond those mandated under the Clear Skies Initiative, the CAA would continue to require the States to get those reductions and to provide States with a number of regulatory tools to do so.

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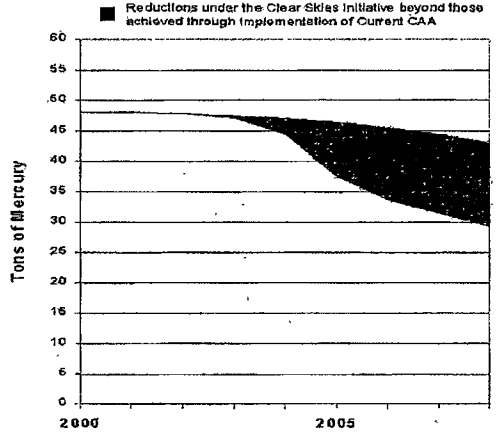
Hg Emissions Under the Clear Skies Initiative

•**Greater reductions, faster, and with more certainty:** Compared to the current Clean Air Act, the President's initiative will reduce mercury emissions by 20 tons over the next 6 years.

•This chart shows EPA's projections of the mercury emissions reductions that would be achieved from power plants over the next 6 years under the current Clean Air Act (CAA) and under the President's Clear Skies Initiative. Projections beyond 2008 are more uncertain for the following reasons:

•Under the Clear Skies Initiative, EPA would be required, before 2010, to review new scientific, technology, and cost information and to adjust the Phase II (2018) caps if necessary to meet clean air standards.

•Under the existing Clean Air Act, EPA is required to set a federal standard for mercury emissions from power plants that would become effective in 2008. The emission reductions that would be required under such a standard are still highly uncertain.



•The Clear Skies Initiative would get substantial reductions in mercury emissions earlier than they will be achieved under the CAA. Furthermore, it would cap mercury emissions into the future, whereas the existing CAA program will allow power plants to increase their future mercury emissions as long as they have installed the required control technology.

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Mr. WALSH. Mr. Cramer.

NEW SOURCE REVIEW

Mr. CRAMER. Thank you, Mr. Chairman.

Administrator Whitman, welcome back before the subcommittee. I regret that I had to leave the room and perhaps missed the line of questioning that some of my colleagues might have taken you into that I want to take you into as well, but I want to talk to you about the New Source Review. Back in 1999, TVA, Tennessee Valley Authority, was sued by EPA—it wasn't just TVA, it was TVA and eight other major utility companies—for failing to comply—or for being in violation of the Clean Air Act.

The issue I want to get your comment about is the routine maintenance issue versus substantial modification of plants. That seems to be the two different phrases that would be in contention here regarding TVA. TVA is in the middle of spending $2.5 billion to clean up emissions, and we think they are doing a very good job, and yet they are caught in what seems to be a Catch-22, that any modifications that they make, even with emission controls, could be cited by EPA as something in violation of the Clean Air Act. Would you respond to that, if you can?

Ms. WHITMAN. Congressman, I can't respond in any detail on the particulars of the TVA case. Oral arguments for that case have been set for the third week in May. We believe it is a very strong case. Justice has looked at all of those cases that were brought under New Source Review, and said they were brought appropriately, so we are continuing to prosecute them. However, the issue of the routine maintenance repair—and what is the third R? Replacement. I forgot it. Routine maintenance repair and replacement is one of the issues that has been brought up time and again as being of concern under the New Source Review.

It is important to emphasize that there are two different parts of New Source Review reform. In 1996, the previous administration proposed some rules that would streamline some aspects of New Source Review and were subject to public hearings. That proposal was subject to public hearings and comment and the full regulatory process.

The routine maintenance repair and replacement provision is one aspect of another set of concerns that has been raised about New Source Review, but that has not been subject to the full regulatory process. It has not, in fact, been even submitted as yet in a proposed regulatory reform. Were the proposal to go forward in that fashion, it would be subject to the full-blown process, which can take up to 3 years.

Mr. CRAMER. When will the administration release its report on New Source Review, or were you discussing that already?

Ms. WHITMAN. No, we haven't discussed that already, but that is still a subject of discussion. We were tasked by the Energy Policy Committee to do a 90-day review of policy on New Source Review. It is an enormously complicated issue and one that requires a great deal of time and attention. We are still in the process of finalizing that and finalizing the recommendations that we would make relative to New Source Review reform. The Clear Skies proposal that we worked on for the President, is the best form of New Source Re-

view reform that we could possibly implement. For utilities, the Clear Skies proposal, as outlined by the President, would make New Source Review as it applies to utilities redundant.

DRINKING WATER VULNERABILITY ASSESSMENT

Mr. CRAMER. I want to switch now to the drinking water vulnerability assessments. In the fiscal year 2002 supplemental bill, there was $90 million appropriated for EPA. I am interested in rural areas and in their opportunities to participate in vulnerability assessments. Those rural areas or small communities have urged EPA to reserve a minimum of 15 percent of the funds for drinking water vulnerability assessments for small communities. What progress or what comment can you give me on that?

Ms. WHITMAN. Congressman, what we have determined is the most important responsibility we have in this area is to make the most systems as secure, the safest, the fastest we can. That does not mean that we are not putting aside a specified percentage of the monies for the small water systems. But, the focus has been on the larger ones in order to ensure the safety of the greatest number of people.

However, we are working very actively with the smaller water systems, and will be providing technical assistance on vulnerability assessments. We vastly moved up the time frame for vulnerability assessments training. We are providing technical assistance, and we are also working with them to help identify dollars that would be available to enable them to move up their vulnerability assessments.

Mr. CRAMER. Well, I don't always like mandatory figures, but I want you to be sensitive to the smaller communities as well, and it sounds like you are. And I want to encourage you to continue to do that.

Ms. WHITMAN. We certainly will. We are very concerned about that, but we are trying to prioritize where the greatest threats are and where we need to focus the resources first.

Mr. CRAMER. Sure.

Mr. Chairman, thank you.

Mr. WALSH. Congresswoman Northup.

EPA GRANT MANAGEMENT

Mrs. NORTHUP. Yes. I would like to follow up with some questions I have asked in the past about EPA grant management and in particular what is being done to get control of the grants that EPA has administered that—certainly I have a copy of the GAO report. It seems to me like this falls into sort of two categories, but they impact each other. One is the fact that grant recipients often don't complete the work that they say they will do. There is very inadequate oversight on whether or not the money is spent as it is supposed to be spent for allowable expenses. Instead it is used for meals that overrun the costs that they are allowed for and so forth. But I think probably the failure to complete the work and receive a new grant while work is still unfinished is, in that category, the more troublesome.

And let me just say this is an issue that I asked the previous Administrator about in great detail and got information that it seems

to me like recent GAO reports have not substantiated. So I realize that you have inherited quite a mess here.

The other side of the area that bothers me is the use of this grant money for purposes that go beyond what should be allowable, particularly political purposes, and if someone who is in a district, who has huge numbers of ads and political activity by groups that come into my district without a recognizable face—truly they fly into town with not one person there at the press conference that lives in my district to host press conferences and put out their political misinformation—it concerns me that they are being funded in part by EPA grants.

I think it is sort of hilarious that in one of the articles I have here, one of the recipients is quoted as saying, EPA grants are very, very discrete projects. You have to identify ahead of time what you are planning to do, meaning you can't do anything like political activities. Of course, in light of the GAO report, it is clear that no one has any idea what these groups do with the money anyway, and number two, we all know that cross-subsidies are possible.

And I just sort of wondered if you could give me any idea what you are doing, what other areas GAO might look at to give us a clearer picture of just what the extent of the problem is, and, you know, a request we might make, if you think that that would be helpful.

Ms. WHITMAN. Well, Congresswoman, I heard you and other Members of Congress on the Hill loud and clear as well as having our own concerns about some of the oversight. One of the most effective ways, in addressing the issue is to move toward a competitive process for nonprofit grants. We expect, in fact, to have a process in place by October of this year that will move us to a competitive process for nonprofit grants. That combined with an increased emphasis on oversight, by requiring that those recipients do report regularly to the Agency, and that we have some way of ascertaining the accuracy of those reports is also at a priority for us. We are moving forward to ensure that all of the taxpayers' grant money that goes in grants is, in fact, spent for the very complicated, very important areas of review for which they have been selected.

Mrs. NORTHUP. You know, I actually think the nonprofit community can provide great educational benefits, and I notice that some of the press has sort of ridiculed some of the studies that have been done, everything from what chemicals are applied to golf courses and so forth.

I have to tell you I don't object to EPA funding reviews of all sorts of environmental activities that Americans take place on. I think we deserve to know whether even walking across a golf course is harmful to our health. So I have in no way an objection to EPA providing as broad-based a network as they can of looks at the environmental impacts on our lives and to provide educational efforts to bring that to our attention. It is the misuse of money that I object to.

I would like to just make one suggestion along those lines. It is my understanding, as I looked at some of this in great detail, that some of the groups, even if they have a review, they then sub-

contract out to other nonprofits to do portions of their work, and at that point many of these nonprofits have more than one—is it called an EIS number or something like that? So that when I ask for—I can't think of what that—some identifier, a number that is, an identifier—that all of those—that an organization has to be consistent with what the identifying number is that they use, and that all subcontractors have to be identified by their number, so that an organization that receives multiple subcontracts, enough that they would be over whatever the level is for an audit, that if their aggregate total grants are over that, that they would receive an audit.

It is the lack of consistency in using the same identifying number and the packet that subcontracts—one organization could actually contract and receive many subcontracts that would add up to over that amount, but they would never appear on any sort of printout of who might have a contract under EPA guidelines.

Ms. WHITMAN. We are looking at this whole area very, very seriously. We are working on developing an order that will replace the current guidelines with an actual order, that will address a number of these issues.

Mrs. NORTHUP. Okay. Thank you very much.

Mr. WALSH. We have just one more questioner this morning, Mr. Goode, and then I think we will take a break, which will put us around noon, and then we will reconvene around 1:30. And I would like to see if we can get the other Members who weren't able to join us this morning, and we will go until as long as there are questions or until 4:30, whichever comes first.

Mr. Goode.

ENVIRONMENTAL REGULATIONS: ECONOMIC EFFECT

Mr. GOODE. Mr. Chairman, this is maybe more of a comment than a question.

I know you get a lot of persons wanting more regulation, and I want to give you a few specifics from my district. Lunenburg County unemployment, around 14 percent. There was a company there this year employed 75 persons, had been in business for decades. The EEQ, because they burned something—and I don't even know what it was they burnt—said they were going to have to come down and do an investigation and do a lot of testing. Well, the company said, hey, you know, we have been here. We are employing 75 persons, but we can't put up with all of this stuff, we are closing our doors. So they went out of business on January 1. We lost 75 jobs. The unemployment is already 14 percent. It is a tobacco-growing area, and you know what a horrible attack the last administration did on tobacco. I want to thank you for being much more balanced than your predecessor.

Another situation, specific, Henry County 3 years ago, they wanted the copper to come out of the water that the persons on the Henry County PSA—the copper level to be lower than the natural copper level in the Smith River.

We negotiated with EEQ and EPA on that and got some relief, but we had outsiders come in. I don't know if they got any of the grants Mrs. Northup was talking about, but they were down there beating the drum for this copper level, and that was great for them, because they weren't going to have to pay the water bills

that the people in Henry County were going to have to pay, jacking them up about $20 per month to meet the standard. And the copper wasn't dangerous to the health of humans. It was some weed over in the Smith River that they were concerned about.

I will go on down to Martinsville and Henry County again. The unemployment now there is between 13 and 15 percent. Martinsville is the city, and Henry County is the county. Henry County has about 55,000 in Martinsville city. Both are losing people. It has about 17,000. I will give you a few of the job layoffs we have had there. VF Knitwear, 3,000 people going completely out of business. They are going to Mexico. Tultex, home-grown, primarily local money there, they went out of business, several thousand people, 2 years ago. They didn't go to Mexico. Furniture is fast going to Mexico and China. We get a lot of Trade Act assistance in Martinsville and Henry County. I am thankful for that.

Let me tell you some of the reasons they are leaving our area. Henry County on a per capita basis had more manufacturing than any other jurisdiction in Virginia, and now it is all going to China and all going to Mexico. One of the factors is they don't have to—they say they don't have an EPA over in Mexico, and they don't have one in China, and they don't have all of the labor demands. They can go over there and pay them a lot less labor.

The point is we are losing a lot of manufacturing jobs, and environmental regulations, I want clear air, I want clean water, but I want the people to have some money so they can get some food and get the basic necessities of life. And the unemployment is going up, and a factor in it is overregulation in this country. They are all going to China and Mexico, and I want to know if they have an EPA in China and Mexico.

Ms. WHITMAN. Well, I know that China has begun to take a very hard look at what is happening with its environment. It has actually changed its mix of energy, and we are looking very closely. We have two entities, NADBank and VEC, that fund environmental projects along the border. The President has been working very closely with President Fox, and I have with my counterpart in Mexico, to address issues of air quality and water quality as they impact the border.

That is not to say they have the same kind of regulation as we do in place, but they actually have recently agreed to establish something like our Toxic Release Inventory for the first time. They are starting to take steps to ensure that they are getting a better understanding of what, in fact, is being put into the atmosphere and looking for ways to reduce that burden to protect their populations as well.

It is really a question of helping with technical assistance and ensuring that they have the wherewithal to do the job. But the sensitivity to the importance of environmental protection has risen greatly in Mexico.

Mr. GOODE. But not quite to the same extent in China.

Ms. WHITMAN. Not the way we have it here.

Mr. GOODE. If I were a manufacturer looking to start up a business, I would say that it would be much easier for me to comply with the rules and regulations in Mexico and much easier for me

to comply with the rules and regulations in China than it would be in the United States. That is a true statement, isn't it?

Ms. WHITMAN. It is probably a true statement, but as trade promotion authority is discussed, and as other trade measures are discussed, giving the President the ability to deal with these issues, those are some of the issues that are coming to the forefront. So in the Chilean Round, and in all of the current trade negotiations that are under way, there is a recognition of environmental impacts and the uneven playing field and the need to provide some relief so that U.S. companies and businesses are not adversely impacted by environmental regulations. We are still maintaining standards that are important to public health.

Mr. GOODE. All right. Thank you for the opportunity.

Mr. WALSH. I believe that concludes this morning's round. Thank you very much for your testimony, and we will reconvene at 1:30. The committee is in recess until 1:30.

[Recess.]

Mr. WALSH. This subcommittee will come to order. Here we are for the second round and why don't we go to Mr. Knollenberg, who was not able to be here this morning, and then I will be going to Mr. Frelinghuysen, and then come back to myself.

Joe, go ahead.

EGU/NO_x: MICHICAN GROWTH ASSUMPTIONS

Mr. KNOLLENBERG. Mr. Chairman, thank you and welcome, Administrator. Nice to have you here. I have a couple of questions for you, and maybe you can help us get on the road with respect to the progress, or maybe the lack of progress we have had on a little matter called the EGU, which I know you are familiar with. It has to do with the NO_X budget, and I have got some frustration myself about the lack of response the EPA has given the State of Michigan concerning the growth assumptions on the EGU. Last year, and you have got the letters from the congressional delegation, from Governor Engler and others, as to putting some emphasis and focus on this, and I think the resolve that we have seen from the EPA hasn't given us any kind of clear directive as to when to expect the ultimate decision by EPA as to how you are going to rule.

The Michigan Department of Environmental Quality and the Michigan Public Service Commission have made a strong case that the methodology used by the agency kind of underestimates the actual rates of growth that have been observed over the last 5 years in Michigan. The courts have also raised that issue, and I don't have to read the report or the explanation that they provided on last May 15, but one of the things they make very clear in their statement is that the EPA claims it made a reasonable choice and it may be right, but simply to state such a claim does not make it so.

There must be, as they go on to say, an actual reason articulated by the agency at some point in the rule making process. They state there is none here. As a result, we have no choice but to remand the EPA's EGU growth factor determinations so that the agency may fulfill its obligations to engage in reasoned decision-making on how to set those growth factors. In a letter sent—a variety of letters went back and forth, but one dated on the October 30, I guess

it was, of last year from Mr. Jeffrey Holmstead, I believe. Is he in the room too?

Ms. WHITMAN. No, he is not. He will be back.

Mr. KNOLLENBERG. There was a statement to indicate that a view would come forward and that the decision that EPA was making could be determined to be supported with a more robust explanation. Well, I don't know what that means, but I do know that we are still waiting for an explanation. And in the second to last paragraph in that letter of October 30, it indicates that in November of last year there would be a resolve in some explanation coming forward. Now, I understand nothing has come forward. Is that true? We have received nothing that I know of.

Ms. WHITMAN. That is correct, and in fact, we are anticipating having that ready by March, the end of this month.

Mr. KNOLLENBERG. Did I hear that Mr. Holmstead just came in the room?

Ms. WHITMAN. Yes. He can come right up here and describe the difference between a robust and just a plain old answer.

Mr. HOLMSTEAD. Thank you for including me.

Mr. KNOLLENBERG. I really would like to know what a more robust explanation is, and if you just entered the room and didn't hear some of the preliminary, we are looking for a response relative to this NO_X issue that we have been scrappling with you for some months now, and you indicate in that letter of October 30 that there would be something forthcoming in November of 2001. Now, the administrator tells me now that is going to be in March of 2002. This is March of 2002; so when is that explanation going to come forward so we can establish some rulemaking here on this issue?

Mr. HOLMSTEAD. What we are still planning to do this month is a response to the remand from the court that would require us to either simply further explain or propose to change the growth factors that we used in setting up the budgets for the NO_X-SIP call. That is what we plan to do by the end of this month under the schedule that we have, I think, given to you and to others.

The real issue, as I think you know, is some concern that in setting up these budgets, the Agency underestimated growth in different specific states, and that is an issue that we have spent a fair amount of time looking at. You know Russ Harding I am sure. I have spent some time talking with him about it. One of the things we want to make sure that everyone understands is that for purposes of setting up the budgets for individual States, we have looked at the growth factor for heat input. What the State is concerned about is not the growth factor for heat input but the growth factor for electricity demand, which are different things.

So what we are trying to do is work through with them the difference between the heat input, which only deals with electricity generated by fossil fuel plants and electricity demand which can be satisfied in a number of other ways. I know one of the issues that has come up is a concern that growth in the State already was higher in the first couple of years than we predicted it would be over about 7 years.

As I understand it, that has to do with at least in part with the fact that a nuclear plant actually went down for maintenance for

a couple of years, and as a result, the fossil fired plants needed to make up that difference and you had a significant growth in heat input. Since that nuclear plant has come back.

Mr. KNOLLENBERG. Which nuclear plant are you talking about?

Mr. HOLMSTEAD. I don't recall the name, but I know it is located in Michigan. There was a plant that was down——

Mr. KNOLLENBERG. It was not a big one.

Mr. HOLMSTEAD. It provided, I think, 10 percent of the electricity in the State.

Mr. KNOLLENBERG. We will get to the bottom of that but go ahead.

Mr. HOLMSTEAD. Since that plant is back up now, the heat rate has actually decreased over the last 2 years, as opposed to increased. We are trying to smooth out that bump if there is no reason to believe that the plant will be down again anytime soon. What we are trying to do is look at a broader historical pattern to make sure that we are getting it right.

Mr. KNOLLENBERG. What we are frustrated with is the fact that we have received nothing, and the promise has been made that it would be forthcoming, and it simply hasn't come, and the frustration runs right through the entire Michigan congressional delegation. The Governor has repeatedly weighed in on this, and he is still weighing in, I am sure. So we would like to see some action in the time frame you have just indicated, sometime in March, so we have some idea about what to anticipate here. I think it was the Cook Nuclear Plant, by the way, that you were referring to.

Mr. HOLMSTEAD. That sounds right.

Mr. KNOLLENBERG. But that has been our concern. We feel that there is a flaw in the formula, if you will, that you are using here, but we need to debate that and talk it through and resolve it so that we have something we can go home with. And I appreciate your response to that, and I look forward to that answer as soon as you can provide it.

Just touching on one other thing, and Mr. Chairman, how much time do I have left there? I am not sure where I am going to go unless I have the time——

Mr. WALSH. 3 minutes.

GRANTS MANAGEMENT: NONPROFITS

Mr. KNOLLENBERG. 3 minutes okay. I will make this comment, and I understand it was covered this morning with respect to the $2 billion in EPA grants to nonprofits and where some of that money went, and I presume you have gone through all that, so I am not going to fertilize that again, but I think there are some questions we should raise there, quite honestly, and I hope that according to the information I have gotten, you are looking into resolving or making a change to the kinds of grants that are made to these nonprofits.

Ms. WHITMAN. We are going to go to a competitive structure for grants for nonprofits. At the same time, we are going to enhance our oversight and requirements for grant recipients so that we make sure we have regular reporting. We are staying on top of them, and we do reach that nexus. Where there is a possibility to audit, we will do it.

COMBINED SEWER OVERFLOWS (CSOS)/SANITARY SEWER OVERFLOWS (SSOS) PRIORITIES

Mr. KNOLLENBERG. I may not have enough time to get through this one, but it is on the CSOs and the SSOs and the role of the Federal Government in addressing the problem of combined sewer systems. I think it has been said in my home State of Michigan that the needs are estimated to be 5.1 billion. We are trying to cut some of those costs down by doing some things that are sort of high tech, such as putting in a liner in some of these older systems, which greatly reduces the cost and it certainly doesn't decrease the efficiency, it improves the efficiency.

So some of those things are being done, but even so, and I think last year you said that one of your priorities was the wastewater infrastructure, and I would hope that that is still the case, and if there is any brief comment you can make on that as to what are your priorities, and when are you setting those out to be accomplished relative to the CSOs and the SSOs.

Ms. WHITMAN. Well, the CSOs and SSOs continue to be a huge challenge that we all face. As I indicated last year, this is an area where I believe we need to have a very strong and engaged relationship with the Congress to try to figure out answers as we go forward, because it really impacts on all of the water challenges we face from drinking water to the combined sewer overflow to the sanitary sewers. We are developing a regulation to better clarify SSO requirements. We are moving forward with that.

There are about 200 municipalities in the State of Michigan that have experienced SSO overflows in the last 5 years. We are working very closely with the State to address those issues. The technology to which you refer is the kind of thing that we are looking at to see the impacts. The Chairman talked about this a little bit earlier today, we are looking at anything that will help States and communities to reduce costs and yet meet the challenge that is posed. We are looking forward to continuing to work with everybody on this issue, but it also goes to the bigger issue that we face in water. It is not just the sewers and the sanitary sewer and combined sewer overflow, but it is also in the drinking water and clean water.

All of those things are interrelated. I don't think we can honestly separate out any of them for the long term. We need to decide on how we can move forward, and what kind of a program we need to put in place to look at all of them, although we have specific regulations we are developing to clarify on SSO.

COMBINED SEWER OVERFLOW CONTROL AND PARTNERSHIP ACT

Mr. KNOLLENBERG. A closing comment on this subject, and I know my time is probably running shy, the Congress has spoken on this issue. As you know, they passed the Combined Sewer Overflow Control and Partnership Act, and it was one of Jim Barcia's, he was the author of that in the 106th Congress. So that is, I think, a Michigan perspective maybe, but it also has been embraced and endorsed by a number of members all over the country, so it is a huge issue, and I am glad to hear you say it is still a priority. It is a huge priority, and I guess it has to remain that

way. We can talk later if we have time, Mr. Chairman, about some of the funding that might be arranged to accomplish that success——

Ms. WHITMAN. Congressman, if I could, one of the things that I have been saying repeatedly is, I believe water is going to be our major environmental challenge of the 21st century. This is so in particular because the costs that we are looking at are so enormous, and so the challenges we face are huge.

We are talking about now not just point source pollution. We have picked the low hanging fruit, as it were. We have done the easy things. Most of those pipes that directly discharge into bodies of water have been dealt with, or at least they are pretty easily identifiable. Now we are talking about watershed base management, and that is going to take a whole different approach. It is going to take education of the public so that they understand that actions far away from a body of water can impact on that body of water, and just the very basic information on how do we deal with the sewers and overflow problems that we have and the infrastructure dollar requirements that are going to be required.

Mr. WALSH. That is exactly why Congress's prerogatives should be respected by the administration.

Mr. Frelinghuysen.

ENFORCEMENT

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman. Governor, could you talk a few minutes about the whole issue of enforcement? There have been a lot of charges and countercharges going back and forth here in terms of what the EPA is doing to enforce existing laws. Could you clarify what exactly what we are doing, you are doing to uphold the laws?

Ms. WHITMAN. Certainly. I would be happy to. We continue to vigorously enforce the laws. And, in fact, last year was really one of the outstanding years. We saw an increase in the number of dollars spent by responsible parties in cleanup, in penalties that they face, and the number of cleanups that were undertaken. Also where those responsible parties didn't come forward in working with us, there was an increase in jail time served. We continue to maintain a very vigorous enforcement program. We are projecting that we are going to continue that kind of enforcement effort.

We certainly don't intend to back away from our responsibilities there, and so we think that we are going to continue to see the kind of message get out that needs to get out. We are willing to work with you if you are going to work with us but if you are not, we are going to make sure that you then are held responsible for your actions.

Mr. FRELINGHUYSEN. Those who suggest that somebody's trying to weaken the rules, that is not in anybody's game plan?

Ms. WHITMAN. No, it is not. Some people have said that we are projecting a lower amount of inspections, and a lower amount of enforcement actions. We always have projections that are lower than the actual numbers. We always do better than we anticipate. As far as inspections and enforcement are concerned, and where our focus is, on the actual enforcement.

I believe that the important thing for us always to remember is you can play a numbers game a lot of different ways. The important thing is are we making improvements to the environment. Are we actually seeing sites cleaned up? Are we going after, as we had the discussion this morning, on polluter pays? Are we going after that? And last year's numbers, as I said, really were record-setting as far as the amount of cleanups that were undertaken, the number of enforcement actions that were taken, and the amount of money that those responsible parties were forced to spend to clean up their activities. That is a good indicator of where we are going.

HOMELAND SECURITY: RESEARCH AND TECHNOLOGY FUNDING

Mr. FRELINGHUYSEN. Changing the subject, sort of going to the issue of homeland security, the President's budget requests an additional $75 million to conduct research on better technologies and assessments to cleanup buildings contaminated by biological and chemical agents. I would assume some of that money is for other related purposes.

Ms. WHITMAN. Yes.

Mr. FRELINGHUYSEN. Could you talk a little bit about that, and is there a linkage between what you are doing and the efforts of other Federal agencies?

Ms. WHITMAN. We work very closely with our Federal partners on these initiatives and particularly in the area of inspections and in research, we are working very hard in research. The activities that would be paid for included under that $75 million are to develop better methods for rapidly detecting contaminants so that we are able to respond more quickly, and technologies for better decontamination procedures. We are working very closely with the CDC and with ATSDR. We are working with the Department of Defense very closely on identifying contaminants. We are looking at new technologies.

Particularly since the anthrax incident, we have, I think, about 35 different technologies that have been proposed to us as being able to decontaminate anthrax very quickly. We are trying to move them forward in an expeditious way, but we have got to make sure they actually do what they say they are going to do.

So we are trying to ensure that we have a variety of options available and we continue to ensure that we coordinate with Homeland Security. In addition, we will work very closely with the others who are involved in the same kinds of activities. The Department of Defense and we have set up—we actually have a task force with them.

Mr. FRELINGHUYSEN. It comes down sort of to a very basic level. The first responders on the scene often are local folks—EMT, police and fire—and they would be involved in seeing the people are brought to emergency rooms. I just want to get a greater feeling that you are involved in link to emergency rooms, CDC, departments of health—all the necessary agencies are talking to one another which sort of brings up the whole issue of whether information systems do talk to one another and how well safeguarded they are.

Ms. WHITMAN. That is a different issue and we are working on that one as well, again under the auspices of Homeland Security.

We are working to develop, for instance, for water systems and chemical companies, secure networked sites for each industry where they can share security information and not have to worry about other people coming in. We have done a lot of revision and a lot of analysis of our own EPA Internet site, including reviewing the information that we already have up to see what we have and how we can protect what needs to be protected, and yet ensure that the local responders have everything they need to be able to respond appropriately to terrorist actions. We are working very closely with State governments, with local governments, and in fact, as far as water security is concerned, we have been in touch with local police forces across the country to help them be aware of vulnerabilities at water systems.

COMPUTER SYSTEM ATTACKS

Mr. FRELINGHUYSEN. Have you had people attack your system? Have you had attacks on your overall computer system and——

Ms. WHITMAN. Not that I know of.

Mr. FRELINGHUYSEN. And have you actually used, like, some departments—DOE came in to see us and they often employ people whose direct work is to see if they can undermine the sanctity and security of systems. I assume that this is the sort of thing that you are looking at as well.

Ms. WHITMAN. We haven't had, that I know of, an unauthorized intrusion into the Agency's network since we have been working on the security system. That is certainly something we take into consideration, and when we work with others to enhance the security of our system, we put it to the test as well.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Mr. WALSH. Thank you, Rodney. Mr. Fattah.

CHILDREN'S HEALTH: LEAD-BASED PAINT

Mr. FATTAH. Thank you, Mr. Chairman. Governor, it is good to see you again. In the mid Atlantic region, in Pennsylvania specifically, you have done a number of grants related to the eradication of lead-based paint, and I was wondering how involved the EPA is in this issue nationwide, how big a problem do we still have of children growing up and living in housing in which there is lead-based paint and I am just trying to get a sense of the scope of the problem versus the level of your response and whether HHS is involved also or is this a purely EPA issue?

Ms. WHITMAN. Oh, no. It is a much bigger issue. I believe it is a million children who still suffer from——

Mr. JOHNSON. Yes.

Ms. WHITMAN. Yes. A million children still suffer from lead poisoning. One million is a number that we feel is totally unacceptable, because it is a preventable problem. We just announced a joint settlement with Housing and Urban Development with one of their contractors that will—they will go back——

Mr. FATTAH. A very large sum.

Ms. WHITMAN. Yes. That is 320,000 units, I believe, that are going to be remediated to get the lead out. We need to expand that. We are looking very actively at other ways in partnerships in which we can enter. We work closely with the Department of

Health and Human Services, and this is a major issue. In fact, I just met with one of our scientific advisory committees and asked them to focus on lead as a challenge. It is something that I believe we should be able to eliminate as a threat to our children.

Mr. FATTAH. Governor, you know that we have known a lot about this for a very long time.

Ms. WHITMAN. Yes.

Mr. FATTAH. It will be helpful to me if you could provide the committee with some information about the scope of the problem, not just the number of children. I heard you say a million, but the number of what we perceive to be housing units, and if that is the case, are there other facilities in which children are in schools, other places where there still may be lead contamination, and if anyone could give a sense of what it would cost to once and for all resolve this problem, because as we know, it interferes with the educational levels attainment of these children, and the President has said he does not want to leave any children behind, and it is impossible not to leave children behind if they are going to be contaminated by lead-based paint.

And so I know of your interest in this. It will be helpful for me to get a sense of—since it is something we could actually concur if we were determined to do so, if we could get a sense of what it would take to do it.

Ms. WHITMAN. We could certainly do that for the record, but Steve could add to the conversation right now, Steve Johnson, who is the Assistant Administrator for the Office of Prevention, Pesticides and Toxic Substances.

Mr. FATTAH. Thank you.

Mr. JOHNSON. Thank you, Governor. The issue of lead-based paint is a serious issue facing the United States and as Governor Whitman said that we do still estimate close to a million children with blood lead levels over an acceptable level, the good news is that some recent survey work done by CDC actually shows that the numbers of children are coming down. So that is very good news.

As far as the number of houses, there are pre-1978 homes where typically lead-based paint was used, and our estimates are that there are about 15 million housing units across the United States. Each year there is a variety of things that are done to those homes, renovation, remodeling, and those activities lead us to much greater numbers by several orders of magnitude.

So we are looking at not only the total number of housing units, but also we have got some fairly good estimates working with HUD on the number of renovations and remodeling that go on, and that is clearly an issue that we are trying to work our way through.

Mr. FATTAH. In terms of abatement, is there an estimate of what it would take to clear the contamination in these——

Mr. JOHNSON. I don't have that figure off the top of my head. I would be happy to provide that for the record.

Mr. FATTAH. If the EPA could provide that for the record.

Ms. WHITMAN. We would be happy to provide that for the record.

[The information follows:]

LEAD-BASED PROBLEM

The primary federal clean up role is with HUD. The USGS has determined that 96.4% of all lead paint used in this country was used before 1960, so that is the focus of some recent HUD estimates. In February 2000 HUD estimated that it would cost $20.7 billion to identify and abate all lead hazards in the 2.3 million pre-1960 housing units occupied by low income families not covered by HUD's Lead Paint Regulation. We would consider these units to be the most high risk housing units. Alternatively, HUD estimated that it would cost $2.3 billion to conduct more limited lead hazard reduction or interim control activities in the same 2.3 million high risk pre-1960 housing units. Note that because these interim control activities do not remove all lead paint, they require periodic inspection and maintenance to ensure that no new lead hazards emerge. To clear up all lead hazards in every housing unit they estimated it would cost $166 billion.

EPA's role in addressing the lead-based problem include clean up standards based on the overall risk of exposure, creating a national/state/tribal regulatory framework for certification and training of lead-based paint abatement professionals, and outreach to people who might be at risk of exposure to lead-based paint.

WATERSHED GRANTS INITIATIVE

Mr. FATTAH. This is not one of those problems that we haven't figured out how to deal with, it is a problem where we haven't generated in terms of the resources to actually do something about, because we know how to solve this problem. It is not rocket science. So I would appreciate that, if you could provide it.

Can I ask one other quick question about watershed issues. I note that your budget request requests $21 million for assessment purposes. In our region there has been a lot of assessment already. I was wondering for areas in which assessment is no longer a need, would those dollars be available for other purposes?

Ms. WHITMAN. The $21 million to which you refer is to identify 20 watersheds throughout the Nation that are threatened watersheds, and to provide some dollars to the States and the local entities to do planning for mitigation. It is separate and is on top of the Section 319 money and other moneys that go for nonpoint source pollution that the States use currently for watershed management. So for those areas that perhaps might not be one of the 20, there are still other dollars available to move them from the planning process into implementation. What we are trying to do is start to see how we leverage the other dollars that we have out there in watershed management, and if we cannot also develop some models for others to look at for ways to address watershed degradation problems.

This approach is based on the Charles River in Boston. They have a very successful public private partnership with some NGOs the city, the State and the Federal Government that has resulted in a very dramatic cleanup of the Charles River. So we are looking forward to being able to provide that kind of example for people, and hopefully we believe to show them ways to, in a cost-effective manner, remediate some of these water issues. The other funds continue to be there, such as the 319 funds, the State revolving loan funds, and all of those could be used for the projects to which you refer.

Mr. FATTAH. Thank you very much, Governor. Thank you, Mr. Chairman.

MANAGEMENT SCORECARD

Mr. WALSH. Thank you. I will begin the next round. We will get back to order. I would like to touch on another subject, and that is the EPA's management score card. For those on the Committee and in the audience who may not know what this is, the Office of Management and Budget has determined to score every Federal entity in five broad management categories. It is noted in your budget submission—which, I should note, are illustrated in a stoplight mode, red supposedly being bad, green being good—were as follows: Budget and performance integration, yellow; e-government yellow; human capital, red; competitive scoring, red; and financial performance, red.

I should mention the EPA's scores were, in fact, pretty good compared with most other agencies' score cards.

On the other side, this whole idea strikes me as terribly subjective, and in fact, not particularly helpful in resolving real and specific problems. I think there are some agencies that scored fairly well that may not be considered well managed at least in the Congress. Recognizing that you have to be judicious in how you respond, do you believe that the OMB exercise is helpful in resolving actual and known problems at the agency?

Ms. WHITMAN. I do believe it helps focus us, yes. Obviously, we would argue we would want to be an all green. As you pointed out, two yellows is not bad, considering where some of the other departments and agencies are, but we still have challenges in the areas that they have outlined. We do still have ways to go in some of those areas, but we feel we are further along in some and we will just argue it with them. As far as an exercise that helps focus on the priorities of the administration relative to what Congress wants to see and the ability of agencies to report back as well as assure people that we are spending their money wisely, it does help.

Mr. WALSH. I assume this is the management function of OMB as opposed to the budget function of OMB?

Ms. WHITMAN. Right. This is the management function.

Mr. WALSH. Who makes this determination, at what level? Do you know?

Ms. WHITMAN. Signed off at the highest levels.

Mr. WALSH. Signed off, but do they make this analysis?

Ms. WHITMAN. I suspect it gets done further down the line. Who did you have conversations with? Because I know we did argue that our side was a little better on a couple of things than we had before.

Mr. WALSH. If you would identify yourself for the record, please.

Mr. RYAN. Mr. Chairman I am Michael Ryan, Deputy Chief Financial Officer. We spoke with a variety of people at the staff up and down at OMB and——

Mr. WALSH. People who all had extensive management experience?

Mr. RYAN. They are in the Office of Management and Budget.

Mr. WALSH. Had any of them ever managed anything?

Mr. RYAN. I am sure that is true. But we spoke to a variety of them, and they arrived at a consensus that was worked up to the highest levels and signed off.

Mr. WALSH. Do you agree with the administrator that that analysis was objective and helpful?

Mr. RYAN. Mr. Chairman, I always agree with the administrator. And this is no exception.

Mr. WALSH. And I suspect that the director of Management and Budget also agrees with the staff, and vice versa, on these recommendations.

Mr. RYAN. Not to be facetious, it was objective—there was a debate among us. Some of us think, of course, we should score even better, but I think they were objective. They set out criteria, and they did by their best and we actually have been making progress ever since it came out. It has focused, as the administrator said, our attention on these issues, and you can believe that we are spending a lot of time worrying about these five issues.

Mr. WALSH. So they did give you an opportunity to address the proposed score card and effect changes before it was published in your budget documents?

Mr. RYAN. Yes, sir, ample.

Mr. WALSH. This is a question of the Inspector General, if she would care to comment on the score card. If you would, please, feel free to comment on whether or not you were given an opportunity to comment and effect changes within the score card. You don't need to come forward if you just identify yourself.

Ms. WHITMAN. Nikki Tinsley, Inspector General.

Ms. TINSLEY. We did have discussion with the OMB on the e-government score. On the others, we did not have a discussion.

Mr. WALSH. Would this score card be a potential problem wherein certain OMB-identified concerns are assigned a higher priority than they otherwise should or would be by EPA?

Ms. TINSLEY. Ask me that question again.

Mr. WALSH. Would you be concerned that their priorities are different than EPA's?

Ms. TINSLEY. The priorities that are identified in the score card are very consistent with the management challenges that we have identified over the last several years for EPA. They are also consistent with management challenges that other inspectors general across government have identified as important to their agency. In many instances, these challenges, if they are addressed by the agency will provide a good framework for the agency to better manage its operations and to better inform the public about the results of operations, so——

Mr. WALSH. Do you see this as sort of a venture into your role? Is OMB usurping your role as Inspector General in terms of the management responsibilities of the agency?

Ms. TINSLEY. No. I think all levels of government, no matter which part you are in, have a responsibility to make the government operate efficiently and effectively——

Mr. WALSH. And that is not your responsibility?

Ms. TINSLEY. Ours is an oversight responsibility to report how that is working, but it is management's responsibility to make sure that programs work and that there is good financial information and good performance information.

Mr. WALSH. Thank you. Any other comments on the score card?

Ms. WHITMAN. No. I would say this is the one that the President feels very strongly about. The ultimate report card did come up and was signed off on at the highest levels. It represents his commitment to ensuring that we work as efficiently and effectively as we can. Again, we did have an opportunity to push back a little bit to point out where we had made progress during the time that they had started this process to when they came out with the report card and vigorously defend ourselves where we thought we had been unjustly relegated to red. We have made a lot of progress since, but it certainly has been helpful in focusing the agency on these challenges.

LAKE COOLING TECHNOLOGY

Mr. WALSH. I don't know whether I have asked you about this. It is another technology that I have come across. I am not sure whether I asked about it last year, and you may or may not have someone who is familiar with to comment on it, but I would appreciate if you could give me some sort of response in writing, if you can't do it verbally, and that is, this issue of lake cooling.

Cornell University recently employed it, and the Finger Lakes are very deep lakes holding lots of cold water, and the technology draws water from the hypolimnion, which is the bottom of the lake, and it is drawn up and it is run through a system of pipes, and they use it to chill air and then they put it back into the lake, and I guess the issue is the temperature as it reenters the lake and how it affects the ecosystems. Is there anyone at EPA that has looked at this technology? I am sure someone has, but they may not be here.

Ms. WHITMAN. Jeff?

Mr. HOLMSTEAD. No.

Ms. WHITMAN. No one has looked at that particular technology, although we certainly have looked at and are concerned about the impact of activities along lake fronts and rivers, on the temperature of the river and the impact upon the ecosystems. We can certainly have someone sit down with your staff and find out a little bit more about this——

Mr. WALSH. I think if it proves out in Ithaca, for Cornell, and I believe there are one or two Canadian cities that are looking at this technology, it really has dramatic application in the Great Lakes area where you can get to deep water within a mile or two offshore; and I know Rochester, New York has looked at it and believe it or not, my hometown, which is probably 40 miles from the lake, could conceivably utilize that technology too.

But it would be interesting to see what EPA's take was on the technology in the event that it became a broadly-used energy source or energy derivative.

Ms. WHITMAN. Certainly. We will get someone to get the information on it and then get in touch with Cornell.

[The information follow:]

LAKE COOLING TECHNOLOGY

EPA has conducted a review to evaluate the potential effects of this project on Cayuga Lake. A letter dated October 5, 1999 (sent as a mass mailing) describing the results of the Agency's review is attached. Briefly, one concern that EPA has relates to the system's expected discharge of phosphorus, since Cayuga Lake is listed as an impaired water body for nutrient enrichment. The system would withdraw deep cold water from the Lake for cooling purposes and would discharge to the shallow southern portion of the Lake. This discharge, at its maximum permitted flow, will result in a 3 to 7 percent increase in total phosphorus loading per month to the top layer of the lake during those months when the lake is stratified. This is a transfer of phosphorus to the lake. However, there is concern regarding the potential for algal blooms due to this phosphorus transfer. The evaluation concluded that EPA does not believe the plant will result in significant or discernible increased algal growth.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

OCT 5 1999

Dear Sir/Madam:

Thank you for your interest in Cornell University's Lake Source Cooling Project. In response to the concerns of citizens such as you, the United States Environmental Protection Agency (EPA) has completed a review to evaluate the potential effects of the project on Cayuga Lake. The details of this review are provided in the enclosure.

The New York State Department of Environmental Conservation (NYSDEC) issued a State Pollutant Discharge Elimination System (SPDES) permit to Cornell University for this project in January 1998. The comment period during which the EPA and concerned citizens could have objected to this permit has expired.

Cornell has presented the Lake Source Cooling Project as an innovative approach to meeting cooling needs without the use of ozone-depleting chlorofluorocarbons (CFCs). EPA does not believe that the Project will result in significant algal growth because the project will discharge total phosphorus at a concentration below NYSDEC's guidance value of 20 µg/L (ppb) and below ambient concentrations. Also, the discharge should be sufficiently mixed so as to minimize the impact of soluble reactive phosphorus on any expected algal growth. Although adverse impacts are not expected, EPA recognizes that the fate and transport of nutrient discharges in lakes are affected by a complex variety of factors. One of the safeguards included in the permit is a special condition which requires re-evaluation of the outfall location if monitoring data shows that the Project is causing significant adverse effects on the Lake. NYSDEC has agreed to begin the process of developing criteria that will be used to evaluate whether any such significant adverse effects result from the Project. EPA expects that the criteria, used in conjunction with Cornell's monitoring results, will allow for informed and sound decision-making regarding the Project's effect on the Lake. EPA Region 2 staff will participate in this effort in cooperation with NYSDEC. EPA has and will continue to advocate strongly that, as the criteria are developed, they should be shared with all interested stakeholders for comment and discussion.

In addition, EPA, in its oversight capacity with NYSDEC, is committed to reviewing monitoring data and information pertinent to any permit modifications or renewals for the Lake Source Cooling Project discharge.

EPA staff will continue to explore ways in which we may contribute to the state and local planning efforts for improvement of Cayuga Lake water quality. We believe the most effective watershed planning efforts are those that reflect the concerns and input of a broad stakeholder base, and we remain optimistic that future efforts will be based upon such an approach. We will urge Cornell University leadership to participate as a stakeholder in these future efforts.

Please take the time to read the enclosed EPA Region 2 review of Cornell's Lake Source Cooling Project. If you have any questions, please contact Mr. Philip Sweeney, Chief of the Permits and Pretreatment Section at (212) 637-3873.

Sincerely,

Kathleen C Callahan

Kathleen C. Callahan
Director
Division of Environmental Planning and Protection

Enclosure

EPA Region 2 Review, Cornell Lake Source Cooling Plant

Background

This paper has been developed in response to public interest about the proposed construction and operation of the Cornell University Lake Source Cooling Plant ("the Plant").

One of the public's primary concerns relates to the Plant's expected discharge of phosphorus, since Cayuga Lake is listed as an impaired waterbody. The Plant, as proposed, would withdraw deep cold water from the Lake for cooling purposes and would discharge to the shallow southern portion of the Lake. This discharge, at its maximum permitted flow, will result in a 3 to 7 percent increase in total phosphorus loading per month to the epilimnion of the Lake during those months when the Lake is stratified. This is a transfer of phosphorus from one water layer to another and not an introduction of additional phosphorus to the Lake. However, there is concern regarding the potential for algal blooms due to this phosphorus transfer. From the regulatory perspective, the Environmental Protection Agency (EPA) has been asked to rescind (or have the State rescind) the State Pollutant Discharge Elimination System (SPDES) permit. Also, federal regulations have been cited which prohibit permit issuance to new dischargers which cause or contribute to a violation of water quality standards. From a general water quality perspective, there has been a call for action (through the Total Maximum Daily Load (TMDL) program, for example) for broader watershed activities to address various sources of pollution which impact the Lake.

The SPDES permit for the Plant's discharge was issued in January 1998. The permit authorizes the discharge of about 46 million gallons per day (MGD) of cooling water, which would be drawn from deep water in the middle of the lake and discharged to shallower near shore water. The permit includes a "resource monitoring" condition which establishes phosphorus and chlorophyll-*a* monitoring and allows for permit modification to extend the outfall into deeper waters or to require phosphorus treatment if the ambient phosphorus levels increase or if the Lake water quality deteriorates due to the Plant. Specifically, the permit states that, "if trending shows a statistically significant increasing concentration for total phosphorus over time, the outfall will have to be re-evaluated." Further, the permit provides that, "[s]hould the water quality of the discharge area of Cayuga Lake be proven to have deteriorated because of the addition of the Cornell LSC outfall, the outfall location and discharge parameters must be re-evaluated."

EPA has reviewed certain documents about the Plant and the Lake, including the Cayuga Lake Defense Fund's Citizen's Guide, the project review completed by Dr. Alexander Horne, the State Environmental Impact Statement, recent data from Cornell's monitoring program and the New York State Department of Environmental Conservation's (NYSDEC) 303(d) List and the SPDES permit for the Lake Source Cooling Plant.

Scope of EPA Review

EPA is empowered to review and object to proposed wastewater discharge permits developed by an authorized state, such a New York. Applicable regulations regarding such actions are found in 40 CFR Part 123.44, which outlines EPA's responsibility to document how a proposed permit would fall outside the bounds of the Clean Water Act or EPA regulations before an objection to a State permit could be raised and the timeframe within which EPA must raise such an objection. In this instance, the timeframe has expired since the permit was issued and became effective. EPA does not have the authority to object at this time. EPA also notes that procedures exist in the State program for interested persons to comment on draft permits and challenge State permit decisions, but the time period for such challenges are also past in this instance. By all indications, NYSDEC provided the required opportunity for public participation through the permitting and environmental review process.

Notwithstanding EPA's limited authority at this time, a technical review of the project has been completed. In completing this review, EPA has sought to evaluate, in general, whether the Plant would cause adverse impact to the Lake. However, since the review has been completed outside of normal regulatory processes, EPA did not evaluate whether particular NYSDEC decisions regarding the Plant or the Lake were appropriate. Instead, EPA has used its best efforts to review the Plant's potential impact upon water quality, which has led the Agency to look ahead towards the appropriate next steps which could be implemented to improve and protect the Lake.

Phosphorus

The primary focus of EPA's review has been the projected phosphorus discharge from the Plant and related issues such as the attainment of water quality standards in the Lake and whether the Plant's discharge will adversely affect the environment. In short, EPA does not believe that the Plant will have an adverse effect on the Lake.

Specifically, EPA does not believe the Plant will result in significant or discernible increased algal growth. This conclusion is based upon an analysis of phosphorus and chlorophyll-*a* data and on the expected dilution of the discharge. In general, the project will discharge total phosphorus (TP) at a concentration below the NYSDEC's guidance value of 20 µg/L and below the concentration present in the receiving waters. The discharge, which will contain soluble reactive phosphorus (SRP) at a concentration above that in the receiving waters, should be sufficiently mixed so as to minimize the impact of the soluble reactive phosphorus in terms of any expected algal growth. Modeling under worst case conditions predicts that the concentration of SRP will be diluted to within 0.5 µg/L of ambient concentration within 300 meters of the diffuser.

EPA recognizes that this conclusion is based on judgment and acknowledges that there is a chance that unanticipated adverse impacts could occur. Therefore, EPA has engaged in discussions with NYSDEC about additional measures that could be taken to identify as rapidly as

possible any unexpected impacts. NYSDEC has agreed to work with EPA, and Cornell, as the permit holder, to begin immediately the development of the criteria that would be used to determine if the project is causing adverse impacts. These criteria would serve as a decision framework to assist in the implementation of the SPDES permit condition which requires re-evaluation of the outfall location if there is a statistically significant trend of increasing levels of total phosphorus or chlorophyll-*a* in the Lake.

NYSDEC is directing the development of these criteria, with assistance from EPA. An initial meeting has been held, and additional actions are expected, such as development of a written proposal by Cornell. EPA has and will continue to advocate that opportunities be provided for informal public review, input and dialogue with all interested stakeholders.

Temperature

The temperature of the discharged water from the Plant will be cooler in the summer (13 °C or 56 °F) and warmer in the winter (9 °C or 48 °F) than the ambient temperature in the immediate vicinity of the outfall. The water temperature will return to within 0.5 °C of the ambient temperature with 300 meters of the diffuser during the month of August when the temperature difference between the discharged water and ambient conditions will be greatest (8 °C or 15 °F colder). Since the Plant will discharge water of lower temperature than ambient during summer months, the Plant clearly will not result in excessive temperatures in the discharge plume during those critical summer months which could cause adverse effects on aquatic life. As a result of these factors, EPA has concluded that thermal impacts are not a significant concern, and we have chosen not to conduct a detailed review of this issue.

Dredging

Concerns have been raised about potential adverse effects of dredging operations on lake water quality, particularly regarding turbidity. Responsibility for review of Cornell's proposed dredging and filling operations resides with NYSDEC and the U. S. Army Corps of Engineers. The SPDES permit (which has been the primary focus of EPA's review) does not regulate these operations. Further, EPA has reviewed the State's Environmental Impact Statement and agrees with the findings that any adverse impacts would be minor, temporary and localized. Therefore, EPA has chosen not to conduct a detailed review of this issue.

Status of Lake Listing.

With regard to broader watershed activities to address the stresses from nutrients and sediments documented in the 1998 NYSDEC 303(d) List, it is important to clarify the NYSDEC's planned activities as stated in the report. Cayuga Lake was listed in Table F of the report, entitled "Waterbodies Requiring Verification." The report states that NYSDEC believes these

waterbodies should be removed from the 303(d) List and explains that the State plans to re-evaluate these segments between 1998 and 2005 to ascertain their status. If new data, collected during this timeframe, indicate that Cayuga Lake is in compliance with water quality standards, the Lake will be delisted. If, on the other hand, data indicate that standards are not being met, NYSDEC will maintain the Lake on the 303(d) List and will develop, as necessary, Total Maximum Daily Loads (TMDLs) for the specific pollutants of concern. In simple terms, TMDLs establish the maximum amount of a pollutant from all sources that may be introduced into a waterbody while ensuring attainment of water quality standards. NYSDEC's schedule for reassessing the status of Cayuga Lake, contained in its 1998 303(d) List (p. 10a, under the Oswego-Seneca-Oneida Basin), includes water quality screening to begin in 2001, monitoring in 2002, and evaluation of whether a TMDL is needed by 2003.

Regarding the State's expected re-evaluation of Cayuga Lake, EPA encourages interested persons to remain engaged in this issue and provide input on the meaning of any new data which becomes available. Further, interested persons may want to evaluate the resource monitoring plan required by the SPDES permit (discussed above) which, in part, outlines the ambient sampling program for phosphorus and chlorophyll-*a* in the Lake. Cornell has submitted this plan to NYSDEC, and certain revisions are expected before it is considered to be final. The data obtained from this plan may be particularly important to the State's 303(d) re-evaluation, in addition to assisting in an evaluation of whether the outfall location is acceptable or should be changed. EPA staff are available to provide some guidance and assistance to individuals who become involved in these matters.

Finally, we note that there are a number of positive actions which are already planned or are underway which should reduce phosphorus discharges and improve the quality of the Lake. A number of these actions are described below. EPA strongly believes that a broad based, effective public involvement program for these planning efforts and the effective dissemination of information on progress will be a critical part of their success.

Related Cornell Discharge

A separate SPDES permitting issue which was evaluated relates to storm water discharges from the construction of the Lake Source Cooling Plant and pipelines. Current Federal and State requirements specify that construction activities (clearing, grading and excavation) which disturb five or more acres and which result in point source discharges to waters of the United States require permit authorization. EPA staff discussed this matter with Cornell and NYSDEC and received confirmation that Cornell has obtained coverage under the Construction Storm Water General Permit which NYSDEC uses to regulate projects which meet the five acre threshold. Further, EPA understands that Cornell and its construction contractor(s) are implementing pollution prevention and sediment/erosion control measures which are specified in the NYSDEC SPDES General Permit. Any comments or concerns about Cornell's implementation of control measures should be promptly reported to the NYSDEC Region 7 office in Syracuse (315-426-7500) so that corrective measures may be considered.

Related Projects and Programs.

One other noteworthy development is the planned upgrade of the City of Ithaca Wastewater Treatment Plant. NYSDEC reports that the New York State Clean Water/Clean Air Bond Act is providing several million dollars for phosphorus treatment facilities at the Ithaca plant. Bond Act monies are also being provided to the Town of Lansing to address failing septic tanks. NYSDEC has advised that these projects will counterbalance any increases from the Cornell project. To help illustrate this issue, the expected reduction in phosphorus at the City of Ithaca Plant is 15 pounds per day, compared with the discharge of 7.7 pounds per day from the Cornell Project during maximum operations. Approximate timeframe for completion of the two projects is three to four years.

Another important program which interested persons should be aware of is the Cayuga Lake Watershed Management Plan. EPA understands that the New York Department of State is funding the development of the Plan, and that active participants include the Town of Ledyard, the Central New York Regional Planning and Development Board, the Genesee Finger Lakes Regional Planning Council and the Cayuga Lake Network. Development of the Plan is a prerequisite for additional funding of projects and programs (under the State Environmental Bond Act) which are identified as important to lake protection and restoration. In EPA's view, development of such Plans and the resulting implementation of priority actions provide good opportunities for local organizations to promote and participate in important preservation activities for valuable resources like Cayuga Lake.

EPA would also like to comment briefly on certain storm water and animal feeding operation issues which may be relevant to concerns about sources of pollution in the Lake. First, NYSDEC is implementing a storm water control program for industrial and construction activities. Consistent with the Phase I storm water regulations issued by EPA in 1990, NYSDEC has issued two general permits which establish pollution prevention requirements for industrial facilities and construction sites of five acres or more (as discussed above). Industries and construction site operators are expected to obtain coverage under these general permits and to comply with the permits' terms and conditions. In addition, EPA published draft Phase II storm water regulations in 1998 which propose, in part, to expand the regulated universe to include construction sites of one acre or more, and to greatly expand the number of municipalities which would be brought into the NPDES program for the first time. Ithaca, Lansing and Cayuga Heights are identified in the draft rule as places which would be required to develop and implement storm water management programs under this new part of the program. In addition, entities such as universities and highway authorities which own and operate storm sewer systems in the specified urbanized areas could be required to obtain permits and implement management programs. EPA expects to issue final Phase II regulations later this year. Following issuance of the rule, it is anticipated that States will be allowed about two years to make specific decisions about the municipalities and other entities which require permits.

Regarding animal feeding operations, NYSDEC has recently issued a general permit for Concentrated Animal Feeding Operations ("CAFOs") which implements the existing NPDES regulations for facilities which confine large numbers of animals such as cows, pigs and poultry.

This permit prohibits any wastewater discharges from CAFOs, except during unusual storm events which cause an overflow from containment facilities designed to hold wastes from a 25-year, 24-hour rainfall event. The permit also requires development and implementation of an Agricultural Waste Management Plan, consistent with established standards, to manage solid and liquid wastes. The permit requires existing CAFOs to obtain permit coverage by January 1, 2000.

In addition, EPA and the U.S. Department of Agriculture have developed a Unified National Strategy for Animal Feeding Operations which addresses smaller operations and which focuses on voluntary efforts to properly manage wastes at farms which would generally be exempt from regulatory requirements.

In summary, there are several ongoing programs which are expected to reduce total phosphorus loadings to the Cayuga Lake watershed over the next few years. In time, these reductions of phosphorus loading will improve the condition of Cayuga Lake.

Mr. WALSH. Thank you.
Mr. Mollohan.

CLEAR SKIES INITIATIVE: EMISSIONS STANDARDS TECHNOLOGY

Mr. MOLLOHAN. Thank you, Mr. Chairman. Governor, there have been a couple of questions asked about the Clear Skies Initiative, and I must say, I am not completely unhappy with the idea of coming forward with a scheme that defines the standard, but doesn't set the technology by which that standard must be achieved, which I understand this leans toward. And the President, through this initiative, would encourage utility sources to find the most innovative ways to achieve reduced emissions, as the plan will outline, without dictating what kind of technology is to be used to achieve the emission standards.

However attractive that approach might be in my area, this budget for the Department of Energy reduces the spending on Fossil Energy Research and Development by 16 percent and reduces the Fossil Energy Coal Program by 7 percent. Those accounts are where the critical research involving Department of Energy and utilities is performed to create the systems to come forward with the innovative technology in order to achieve compliance with any standard. It just prompts me to ask why would we put a plan in place that requires utilities to reduce emissions through innovative technology and at the same time dramatically cut the very programs that are helping, in partnership with private industry, to create innovative technology.

Ms. WHITMAN. Well, Congressman, obviously I can't speak to the specifics of the DOE budget. I will say that under the Clear Skies Initiative, our budget, what the President has proposed when he talked about our commitment to greenhouse gas reduction of intensity by 18 percent, and the energy report, there is a great emphasis on different ways of spurring technology through tax credits and other initiatives. With Clear Skies, we are looking at mandatory caps on emissions recognizing that there already are about five regulatory programs that are either in effect now or coming into effect, everything from the NO_X-SIP call to the BART Rule, to the MACT Standard, and others. All of which will require that utilities make changes and find ways to reduce these emissions. The premise of the Clear Skies is that by setting those standards all at once at one time, they know exactly what they are going to have to get to on everything, and they can begin work now. In fact, there is a lot of research they have already done, and it becomes in the long term in their financial interest to increase some of the spending that they do on research and development. It does not become the responsibility of the government to have to supplement or support the research and development they are doing, so I presume that is part of the reason.

Mr. MOLLOHAN. On that point, I would invite you to look at that connectivity between what you are doing here on the enforcement side, on the standards setting side, and what DOE is doing on the research side. I do think they are very, very complementary, and I know you are extremely sensitive to that, but I encourage you to look more carefully at what they are doing on the research side.

Ms. WHITMAN. And we are doing quite a bit on research as well.

Mr. MOLLOHAN. Yes. And there have been hundreds of millions of dollars spent on this, and there is some very exciting stuff on the horizon that could be very complementary to this philosophical approach to emission standards. I encourage you to look at that.

Ms. WHITMAN. Certainly.

NATIONAL ENERGY POLICY: NEW SOURCE REVIEW AND ENFORCEMENT ACTION

Mr. MOLLOHAN. The President's national energy policy was released May 17, 2001, and he directed the EPA and the Justice Department to review the impact on utilities and refineries of the Clean Air Act's New Source Review requirements and the recent enforcement actions taken. Where are you in this process?

Ms. WHITMAN. We are close to completion of the 90-day review that we were asked to do of New Source Review. As I indicated earlier, we are doing a very comprehensive review. It is a very contentious and complicated issue and we are very close to completion of that initial review. Then there are two different parts of New Source Review reform that have been proposed. One is based on a set of regulations proposed by the previous administration that actually went out in regulation for comment where they solicited comment.

We have had comment and input since 1996. The other set is a number of recommendations that were made that go beyond what was proposed in 1996 and would vastly streamline New Source Review. However, those have not gone out in a proposed rulemaking, they haven't been subject to public comment. We would have to do that. That is about a 3-year process, and that is one of the reasons why we would be so anxious to get the Clear Skies proposal through. With the numbers that the President laid out under Clear Skies, we would get better reductions faster and less expensively than we will get under the current Clean Air Act, and therefore it would make it redundant.

CLEAR SKIES INITIATIVE VS. NEW SOURCE REVIEW

Mr. MOLLOHAN. What is the relationship between Clear Skies Initiative and the New Source Review?

Ms. WHITMAN. There actually isn't any. They are totally separate. The Clear Skies proposal has been outlined by the President, and at the end of the day, what is going to be important where that ends up. If it were to be enacted, given the President's numbers, then New Source Review, as it applies to utilities, would be redundant, and we would no longer need to have it because we would be getting less emissions under the Clear Skies than we would get under the New Source Review.

It all depends on where the legislation ultimately ends up. But they are totally separate. The review that we are doing of New Source Review and the potential for a proposal on the 1996 rules, are separate and we haven't taken any action on those yet. There has been nothing finalized.

Mr. MOLLOHAN. Do you plan on releasing your review of the New Source Review?

Ms. WHITMAN. The review of the review? At some point, yes. When we finally get through the process.

Mr. MOLLOHAN. Do you have any idea when that might be?

Ms. WHITMAN. I keep saying soon, and soon becomes longer and longer, but in Washington, I am finding that is sort of the way it happens.

Mr. MOLLOHAN. It is a complicated issue.

Ms. WHITMAN. It is. We are working amongst departments too, as it impacts a lot more than just EPA.

ENFORCEMENT: FTE REDUCTIONS

Mr. MOLLOHAN. Staffing, I think we have touched on that a little bit, but again, if I might circle back around because I want to understand how your recommendations for FTE reductions are going to impact enforcement and the State's role and capability of performing enforcement. There is some angst out there in the country on this. You made a similar request last year: It wasn't approved. Your proposed cut for 2003 is about half of last year's proposal, but it is still a reduction of 95 FTEs, which I consider to be significant. What can you tell us about the justification for cutting staffing at your enforcement office?

Ms. WHITMAN. Congressmen, we won't be cutting actual bodies. We, in fact, anticipate hiring 100 new people starting now. We are in an active effort to recruit.

Mr. MOLLOHAN. Is that because you have a lot of current vacancies?

Ms. WHITMAN. Yes. That is part of it. At the end of the year, we average a turnback of about 120 what I call funded vacancies, that the program carries. It is just the nature of the program——

Mr. MOLLOHAN. Are you talking about in the enforcement area?

Ms. WHITMAN. In the enforcement area. About one fifth of our personnel is in the Office of Enforcement and Compliance Assurance. The cuts that are being referred to are really in that number of funded vacancies. We don't anticipate any layoffs of current staff or any reassignment of current staff. Basically our proposal would lower the ceiling up to which we could go, but a number of positions within the ceiling are not filled.

Mr. MOLLOHAN. So you are proposing having 17,648 FTEs. You are saying enforcement represents about——

Ms. WHITMAN. Our Enforcement and Compliance Assurance Office represents one fifth.

Mr. MOLLOHAN [continuing]. One fifth of that number and of that one fifth, you are proposing eliminating 95 FTEs, for which there are vacancies existing at the present time?

Ms. WHITMAN. Yes. I believe the reduction can be achieved through normal attrition, without the reassignment of existing enforcement staff, and without a hiring freeze.

Mr. MOLLOHAN. I guess I have to ask why we have vacancies in the enforcement area at this time?

Ms. WHITMAN. Well, Congress gave us money for fiscal year 2002 to hire up and we are hiring up, but not to the full amount that it was anticipated as far as the number of bodies. That had to do with the expense of staff costing us more now. They are getting more sophisticated, benefits and things. Salaries are more expensive; so we don't get as many for the same amount that we had before.

But again, what I go back to is the performance, and the performance has been very good. We have been able to see a very vigorous enforcement program that has been very successful over the last year. We anticipate having the same number of people to do the job. What we also have proposed, as you indicated, is $15 million to States. States do 90 percent of the compliance and inspections now. That is where we believe we can leverage the enforcement that we have.

So by giving the States the $15 million that we are talking about here, particularly now when so many of them are facing tight budget times, we can help ensure that they continue to the job that they are already doing and which they do very well and help us with that. They are on the ground. They know where the bad actors are. They know where to look. We need to help and enhance that effort while we continue to focus on the things that are the responsibility of the agency.

ENFORCEMENT GRANT PROGRAM PROPOSAL

Mr. MOLLOHAN. I can tell you there is some real concern out there, at least in my State. $15 million spread among all States is not going to be adequate. It is a competitive grant program, isn't it?

Ms. WHITMAN. Yes, the majority of the program will be competitive.

Mr. MOLLOHAN. There are going to be a lot of States that don't participate in that $15 million at all, I have got to believe. Do you have any estimate of how many States will be participating in this program.

Ms. WHITMAN. Not that I know of.

We don't have an estimate, do we?

No.

TARGETED WATERSHED INITIATIVE

Mr. MOLLOHAN. Well, I just want to renew my earlier concern expressed about that. I know last year the Congress did not approve it.

Let me touch on watersheds a moment, Governor. You have testified a bit and some questions have been asked about your New Initiative to fund the $21 million to deal with watershed health throughout the United States. Could you elaborate on how is this program going to work in practical terms? I have a chart here that indicates that its proposed implementation schedule is to start in the spring of 2002. At that time you will be announcing the Initiative, sending letters to governors, etc.

Ms. WHITMAN. What we are doing is reaching out to governors to help us put the plan together as the best way to meet their needs. We are working in a very aggressive partnership mode with the States. We anticipate putting a letter out to the States, asking them for their ideas and input as to how best to frame the program so that we can actually target the watershed areas that we want to reach. As I indicated before, this is an effort to leverage the moneys that we are already spending through different programs on watersheds and start to provide States with some examples to follow.

Mr. MOLLOHAN. I think this is an exciting initiative if it plays out the way I imagine it could, for our area certainly. Is there an inland watershed focus to this? I know we have a lot of coastal programs and estuary programs.

Ms. WHITMAN. It certainly isn't relegated to inland waters exclusively, but they would certainly be considered as part of it. Really, when you talk about watersheds, you start inland and work out. Now, we have to work with the States to see how we deal with the coastal plains and the coastal areas and estuaries versus the full watershed. If you look at some of them they encompass a number of States. The exciting thing here is the ability to maximize the money we are already spending, the research that we have done, and to see impact that goes far beyond one particular area stream or watershed.

Mr. MOLLOHAN. I have a couple other questions to follow up, but I know my time is up right now. Thank you, Governor.

Mr. WALSH. Mr. Knollenberg.

Mr. KNOLLENBERG. One quick question, Governor, with reference to Mr.—the gentleman from West Virginia, Alan, which watersheds are you targeting?

Ms. WHITMAN. We haven't drawn——

Mr. KNOLLENBERG. You are going to get to that, to the prioritizing——

Ms. WHITMAN. Yes. We haven't pre-identified them.

COOK NUCLEAR PLANT: FOSSIL FUEL GENERATION

Mr. KNOLLENBERG. I want to go back to this question to Mr. Holmstead referenced in the last conversation I had. It has to do with the Cook Nuclear Plant. The reason we think that—and you might want to come forward and respond to this.

Ms. WHITMAN. So we can give you another robust answer.

Mr. KNOLLENBERG. I need a robust answer, more robust than the last one.

Let me just explain. This Cook nuclear plant that you referenced, I didn't bring it up, but you did, the Michigan view on this is contrary, as you probably know, to what you just stated. You stated that because the Cook Nuclear Plant came back online, that the higher levels in 1998 and 1999 reflect increased fossil generation. That is what you are saying.

Mr. HOLMSTEAD. No. I don't think I explained myself very well.

Mr. KNOLLENBERG. To make up for Cook being off-line, that is what you said.

Mr. HOLMSTEAD. What I tried to say, and I may not have explained myself very well, is that when the nuclear plant went off-line, we saw an increase in the use of fossil fuels in Michigan, not surprisingly. If you take that increase out over a 7-year period, you would predict a very significant increase in the use of fossil fuel.

Mr. KNOLLENBERG. Let me interrupt you, because here is the difference. Cook is a part of the AEP system. It is dispatched by AEP, and the vast majority of its generation doesn't even go into Michigan. It goes out of the State because it is a part of a broader group. I can understand where you might make that assumption that it would stay within the State, but this says, no, that it was outside

the State. It would only make a small difference in terms of the actual fossil fuel generation.

Mr. HOLMSTEAD. No, but I believe the plant is located in the State of Michigan.

Mr. KNOLLENBERG. It is, yes.

Mr. HOLMSTEAD. And the way the program works is that——

Mr. KNOLLENBERG. Which program?

Mr. HOLMSTEAD. The NO_X SIP Call or the section 126 rule, either one. The allowances are allocated on a State-by-State basis.

Now, I don't know——

Mr. KNOLLENBERG. The basis of the generation of the power within that State.

Mr. HOLMSTEAD. Regardless of where it——

Mr. KNOLLENBERG. That doesn't make any difference?

Mr. HOLMSTEAD. I mean, I don't know enough about the AEP system to know where all the plants are located.

Mr. KNOLLENBERG. It is conceivable that most of the power generation could be in Michigan, which would produce a flawed assumption on the part of these growth assumptions that you are making. I am just stating that that is one of the things we have difficulty with, because we are being told that it is for this reason.

Very honestly, I think if you analyze it or look at it carefully you will find that it is a little different than what you might presume, because that power generation didn't go into the State of Michigan. It went outside, and the difference in percentage of growth factor is anywhere between 13 and 31 percent. EPA says 13 percent. We are saying 31 percent. I think something——

Mr. HOLMSTEAD. No. And I agree absolutely. I sense from your questions that you are not entirely satisfied with the situation.

Mr. KNOLLENBERG. I am not.

Mr. HOLMSTEAD. And——

Mr. KNOLLENBERG. In fact, let me just say this. In your letter, your response or your action, your coming up on the Hill by the end of March, we expect to have an answer.

Mr. HOLMSTEAD. What I can commit to with the support of Governor Whitman is that I will make sure that we get to the bottom of all of these issues and that we come up to talk with you.

COMBINED SEWER OVERFLOWS (CSO): FARMINGTON DISTRICT

Mr. KNOLLENBERG. I think we should. I would appreciate that.

Governor, getting back to the item I brought up the last time around, concerning a city in my district, where I mentioned the high technology, the liner that is being used to reduce costs greatly. It is called the cured-in-place method of pipe repair. I have been told that it can double the life of the current pipe at only one-third of the cost of replacing the pipe. I have no idea about projecting the longevity of any of these things, but apparently it has been accepted certainly in some countries. I don't know how much it has been accepted here, but we have one of those in my district, so we are kind of anxious to see how it works out. I have been assured this method is going to work out very well.

You know as well as I do that the cost that is being estimated for these CSOs and SSOs is just horrendous. There is no way we

can do it, and we can't expect by mandates to make the cities and the towns do it.

But what I am wondering is—will the EPA provide flexibility of some kind so that States can at least deal with the problem for less costs?

In my own county again, there is a program.

Where they are expecting the cost to be something like $180 million. They are working on an alternative which may or may not have EPA's acceptance that would cost around $20 million, as opposed to $180 million. They are talking about using existing CSO infrastructure for SSO discharges instead of the retention basin that would cost $180 million, the city claims they can do this for something like 10 cents on the dollar and still bring about a completion.

The point is, though, does it meet with EPA specs? I don't know. Does it meet with the specs of the various States? But it is something that is being looked at seriously, because people, certainly in Michigan and around the country, know that they can't come up with these monies. The mandates are too excessive, too high.

So I guess, what do you need from Congress, if anything, to help you in working with cost-effective alternatives on these various problems around the country. That is worth talking about, I think.

Ms. WHITMAN. Oh, absolutely, and we do have some ability to provide flexibility in meeting standards. It may be, though, as we get into the discussion on these particular water issues that we might need to come back to Congress.

First of all, we should be talking with Congress as we go through this, because it is going to require more than just one entity of government or the private sector to meet these challenges. I don't know that we won't perhaps require some more flexibility from Congress in order to be able to maximize the technology that is out there, but I can't say at this point.

There are a lot of exciting technologies throughout, and actually what you are referring to on that sleeve in the pipes is something I have heard of being used in Newark. They apparently are using that for infrastructure, which is very old and costs just an enormous amount of money in a community that can hardly afford it.

That is the sense of the issue that we face: these costs are just enormous. They cannot be borne by any one entity alone, whether it is a municipal government, State government, Federal Government or the private utility. So we need to be as flexible as we can and understand that, whatever the technology is, we have to make sure it works.

It is not up to us. I would like to get EPA out of the business of designating a single type of technology. What we should do is say, here are the standards that have to be met, and then we do have a responsibility to judge each of the new technologies that come forward to make sure they do what they say they are going to do. Then we can say, yes, this is something you can use or, no, it is not going to do the job they claim it is going to do.

But, beyond that, we should not mandate you have to use this technology, you have to use that one. That to me does not make sense, and we recognize that not all wisdom rests with us.

Mr. KNOLLENBERG. I am glad to hear you say that, because I do think it calls for a greater cooperative effort to collaborate and then cooperate in a way that we can architect some alternatives that are just as effective and costs far, far less. So, thank you.

Mr. WALSH. Mr. Fattah.

ENVIRONMENTAL JUSTICE

Mr. FATTAH. Thank you, Mr. Chairman.

Governor, let me ask you about some environmental justice issues related to, you know, toxic waste cleanup, Brownfields. Your department has—you verified that a disproportionate share of these sites in many instances are in communities that are heavily populated by African Americans, Latinos, Native Americans; and I noted you have been making some efforts in this regard. I want to give you a chance to expound on what is being done and what—to what degree that we can be helpful, you could utilize the—in responding more to these issues.

Ms. WHITMAN. Well, environmental justice is of great concern to us. As you know, there were a number of outstanding title VII issues that we faced. We have been able to reduce that backlog by about 90 percent. As we look at projects, we have to take into consideration, and we do take into consideration, the environmental justice impact of individual projects. We had a bit of a discussion this morning about Brownfields, and——

Mr. FATTAH. I don't want you to be repetitive.

Ms. WHITMAN. No, no, no. From your point of view, what I think is very important in the Brownfields legislation that you all gave the country is not so much the dollars, although the President is requesting a doubling of the Brownfields program to $200 million, but what is most important is the liability protection. That to me is going to provide the greatest stimulus for the redevelopment of these sites, and what we are doing now is working with the States and working with the communities to help them identify Brownfields sites, to help.

I entered into a memorandum of understanding with Habitat for Humanity to identify Brownfields sites that were appropriate for low and moderate income, subsidized housing. We have entered into an agreement with the U.S. Soccer Foundation for those Brownfields sites that could provide soccer fields and recreational outlets. There are a number of different uses, and not only will the reclamation of a Brownfields site help reduce environmental pollution, it will also help increase the health of the community, economically, environmentally and physically.

One thing that we have seen from Brownfields is, for every dollar that the Federal Government invests in a Brownfields site, we leverage $2.50. For every acre of Brownfields that is redeveloped, we save four acres of green space.

We are looking forward to and are excited by the opportunity and the challenge of the new program, but, as I said, it is not going to be just what the Federal Government spends that is going to make the difference. It is also going to be this liability protection, which really is going to free the private sector to become more actively involved in doing Brownfields reclamation. While Brownfields do occur all across the country and not just in urban areas, the pre-

ponderance of them are in urban and low-income areas. So we are looking forward to seeing some very good projects take place.

STATE PERFORMANCE

Mr. FATTAH. Thank you, Governor.

Let me ask you, the report card that the Chairman referred to, does OMB have a score? Do they get reported on?

Ms. WHITMAN. I don't know if they report on themselves.

Yes, they do. Okay. They do. Fair enough.

Mr. FATTAH. But speaking of report cards, since 50 percent of the dollars driven to EPA, you drive to States—and I would assume there will be some political sensitivity, but I am just talking as a general matter. I assume there are some States that are more aggressive, more efficient, more effective than other States, and I would like to know how is it that you go about, I assume through some process of carrot and stick, to encourage those that need encouragement, and is there anything in your budget request that is related or sensitive to those kinds of issues?

Ms. WHITMAN. Actually, all our programs in which we work with the States reflect the individual State's commitment and the sophistication that they have in the environmental area. Most of our programs are competitive. There are some where we do realize that we need to put more emphasis. We mentioned a little earlier on the enforcement side of it, there are some States that do a very good job and some States that don't do a very good job. For those that aren't as geared up to do enforcement, we anticipate maintaining our presence there.

The dollars that we are talking about giving to the States is more to enhance those that, for instance, may have a very good water program but they don't have much in the way of air inspections. If we could give them some money, they could bring themselves up to that level, the same level in air as they are in water. We are very sensitive to the fact that there is an enormous difference, and where there are problems we work with both carrot and stick with the States to try to get them into compliance and to ensure that they are putting appropriate attention to the environmental needs.

CLIMATE CHANGE

Mr. FATTAH. Lastly, I think you referred to it as climate change, that general terminology, global warming. You know, this is the warmest winter on record, and we have some drought issues in both your home State of New Jersey and in Pennsylvania and throughout, which is probably going to lead to a whole range of other issues going forward. I know that you are the administration's point person on this issue and how we are going to both cooperate internationally and what we plan to do domestically, and you may have spoken about this already, but I would like to—if you want to give some remarks on it, I would like to hear it.

Ms. WHITMAN. Certainly. The reason I say global climate change is because in some areas of the globe we are seeing it getting colder. Some of the ice packs are increasing. Other parts of the globe we are seeing a warmer trend. So it is not uniform around the

world. That is why we say global climate change rather than warming for accuracy's sake.

The President's proposal would reduce the level of greenhouse gas intensity by 18 percent over the next 10 years. It provides a cut point to review where we are, to see what we are achieving and if there is a need to have a more vigorous market-based approach to decide that at that time.

There is also a great deal of emphasis put on enhanced research and development on the science. Because while science tells us there is definitely a climate change, our accounting science is not as definitive as to what is causing that, whether it is all human impact, whether it is part of a natural cycle exacerbated by human impact or which of the emissions are the most troubling to the environment.

Black soot, for instance is rarely talked about when people today are talking about what impacts climate change. Yet that is something that those scientists feel has a very big impact on climate change. So the President is calling for a much more focused effort on scientific research, not to deny that there is global climate change occurring. He believes there is. He doesn't think we can wait until we have all the definitive signs. That is why he has proposed the 18 percent reduction in intensity with an ability, should a science review justify it, to stop greenhouse gas emissions entirely and then to start to reduce. I mean, that ultimately would be where we would like to go, if the science can justify that.

What is significant about what he proposed is that there is baseline protection in there for those companies that choose to act early and, to me, that is going to be again one of those things that is going to encourage companies to take action. They will know that they will have protection against any future regulatory change that might demand reductions. Whatever they do now will count against that. We are in the process of developing that system so that we know that we can provide that baseline protection.

The Department of Energy has been charged with enhancing its reporting system. They do maintain a reporting system on greenhouse gas emissions. We are working with them to enhance reporting that so we have a better baseline understanding of exactly what is being proposed. There is an emphasis that the President wants to see us put forward on involving developing nations. When you limit the developing nations and don't have them as part of the process, really, at all, you are missing a lot. You are talking about China, which is the second largest greenhouse gas emitter, or India, which is in the top 10. And the argument, while understandable, that we don't want to do anything that would hurt their ability to grow their economies, the premise that the only way they can grow their economies is by repeating all the mistakes that we made during a period like the industrial revolution totally ignores all the advances that we have seen in technology.

What we should be looking at is, how do we provide a technology transfer? How do we help developing nations continue to grow their economies while being smart about it, using what we know now? How can we help them grow without having them continuing to hurt the environment?

To say we should just do nothing until they have reached economic parity with the developed nations means that we are going to be in a hole so deep, as far as the environment is concerned, that we will never be able to remediate it. So the point here is to engage now with the developing countries, to engage with businesses and technology transfer to make sure that, when we call for great expenditures, we are doing it in the areas that are really going to make a difference. That is how we are proposing to move forward with this climate change proposal.

Mr. FATTAH. Well, let me thank you, Governor, and I wish you well on that.

I guess China at this point would prefer to be on that list of discussions instead of on the other list that has been mentioned.

Thank you, Mr. Chairman.

Mr. WALSH. Thank you.

Mr. Frelinghuysen.

DROUGHT

Mr. FRELINGHUYSEN. Thank you.

The other side of Mr. Fattah's question has to do with water supply. Your budget and your emission has everything to do with quality water, water protection, watershed protection, wetlands protection. Any views as to where we are going in terms of the drought? I mean, I know that this largely falls on municipal and State, but we are looking at a major crisis. I just wondered if you had anything you would like to share for the good of the order.

Ms. WHITMAN. Well, as you know, Congressman, the actual water quantity falls under the realm of the Interior Department rather than under the Environmental Protection Agency. Having said that, of course, quantity affects quality. We see the intrusion of saltwater up our streams, and as we deplete our underground aquifers, as we pollute, we affect the water quality. As we drawdown water, that intensifies some of the adverse impacts we are seeing. So we do have a very real concern; and, as I mentioned earlier, I sincerely believe water, both quantity and quality, will be the biggest challenge that we face.

It is hard to affect people's behavior, to get people to understand that the little things they do can have an impact. We get a pushback all the time, and you see it as we get into drought mode. I saw it when I was governor when I had to declare a drought emergency. People do not believe that if they just wait and run the washing machine when it is full, that what they do in their home is actually going to have an impact on this huge problem that we have. And it does. It is going to take everybody to solve this problem.

It is not just going to be the water utilities. It is not just going to be the States. We are looking constantly—we are working with agriculture to work on better ways with farmers so that they can use better technologies in irrigation. How do we recapture water from run-off? We are looking at what we can do, working with business and industry, to reduce the amount of water that they use in processing. We are doing a lot to try to reduce that dependence.

But at the end of the day, when you talk about irrigation, that gets to be more Agriculture and Interior than it does us. We are

actively engaged in this, because it does have a throw-off impact to us.

Mr. FRELINGHUYSEN. Public education, absolutely essential. I do think sort of like the success of teaching children about the dangers of smoking in school, if—and I know there are some school models out there in terms of water conservation and preservation. It is amazing what you can do. We may be hopeless as adults, but as children we are educable.

Ms. WHITMAN. Yes. We just launched our Web page on the use of water.

Mr. FRELINGHUYSEN. Well, it just so happens, I have a question that relates to your Web page.

Ms. WHITMAN. On water usage for children?

LEAKING UNDERGROUND STORAGE TANK (LUST)

Mr. FRELINGHUYSEN. No. What would be a hearing without a little LUST? The underground storage issue, you are accelerating that program. You have got I think $75 million towards additional cleanup. Any comments in that area?

Ms. WHITMAN. We believe there are about 470,000 leaking underground storage tanks throughout the country. It is clearly an issue of great concern, and that is why we have enhanced funding for it. We are working again on technologies, better technologies for cleanup. We are trying to work with the local communities and States to ensure that they have prioritized the sites and that they are working as quickly as possible to deal with them.

ENVIRONMENTAL TECHNOLOGY

Mr. FRELINGHUYSEN. Lastly, the issue of technology, we have here, as I am sure through your agency, more people coming into our offices with new techniques. I know you have a number of laboratories. I am not suggesting for a moment that they be like Consumer Reports. But I would assume that we don't have the ability to act as a clearinghouse, although to some extent we become a clearinghouse. Do any of your labs look over some of these technologies, some fairly ingenious, to determine whether they have some worth?

Because, you know, with all due respect, the old pump and treat might have been good, but, in reality, there is a lot of technology out there, and it seems to me that we could be—without endorsing a product, we could be doing things a lot smarter and quicker than we are.

Ms. WHITMAN. Absolutely. That is a large part of what the labs do and what we do here in Washington. The Ann Arbor Motor Vehicle Lab, for instance, looks at new automotive technology for reductions of emissions. We are constantly focused on that.

We have a new initiative that I am undertaking in this budget. It is something that I think is very important, which is the National Environmental Technology Competition, and it is designed to help recognize and reward new and innovative technology.

One of the things that we have found is that so many people are working on these areas, and don't always know what the other is doing. Sometimes it is duplicative and then other times they are starting from scratch when they don't need to. So what we are try-

ing to do is help to identify in a more effective manner, those low-cost solutions that exist for environmental programs and for environmental problems and then to stimulate development where the technology gaps exist. We are doing that by recognizing those who have new technologies.

This is going to be a partnership with States and private sector representatives and ensuring that we verify and identify technologies that are actually working and then call attention to them. We are developing criteria for technology evaluation so that we have the highest standards available and make sure that whatever we identify in fact—offers a real solution to the problems. We are trying to get a better understanding between EPA and the industrial sector on a number of environmental concerns and aligning our future environmental requirements with technology performance capabilities.

We have a lot of standards coming online. We are not always sure that the technology exists to meet those standards, and we need to be. We need to be assured that, in fact, you can meet those standards and in an affordable way. I hope that this competition will in fact help us on this.

Mr. FRELINGHUYSEN. Thank you for your testimony.

Thank you, Mr. Chairman.

Mr. WALSH. Mrs. Northup.

OHIO RIVER BRIDGE PROJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT

Mrs. NORTHUP. Thank you. I am sorry I am going back and forth. I hope I am not repeating questions that somebody else has asked, but I have two committees going on at the same time. I haven't learned to be two places at once yet.

I want to ask you about your participation with the Federal Highway Administration on draft EIS statements and your involvement in the NEPA process, and I will just—to give you a general idea, I would estimate that 80 to 90 percent of the constituents in my district support a bridge that has been in the planning process. It has been under study for over 30 years. That is a long time, wouldn't you say? To say it is moving forward at a snail's pace might be an exaggeration of how fast this is moving.

However, we now have a draft EIS before us, but it has raised some questions as I have worked with the Transportation Department. What EPA sees its role in this is, and I guess what—I want to ask some general questions.

I have to tell you that I think the EPA has acted very responsibly with the cabinet in Kentucky in trying to address this fairly, but some of the previous efforts have raised these questions in my mind. That is, does EPA consider land use, planning and zoning a local responsibility or EPA's?

Ms. WHITMAN. That is very definitely a local responsibility.

Mrs. NORTHUP. So would you think it would be appropriate for EPA, in responding to a draft environmental impact statement, to be talking about sprawl and causing sprawl? I mean, how would they be able to do that if they don't even have a set definition between what is sprawl and what is planned growth?

I might just for the record say the bridge we are talking about 35 years ago, when it was first proposed, you might say it would lead to growth. In 35 years, growth has far passed up what this bridge—where this bridge is going to go. It is now almost irrelevant.

But the words sprawl and planned growth are ones that seem to be reoccurring in the EPA's evaluations here.

Ms. WHITMAN. Well, Congresswoman, I think that, as far as the bridges are concerned, right now most of the issues where we had concerns with this project have been resolved. It is not up to us to make the final determination on smart growth. We are not the Nation's planner.

However, I do think it is appropriate to raise the issue of sustainable development and smart growth, simply because when we continue to put additional pressure on the environment we end up having to deal with the consequences of that. But, at the end of the day, that is the final decision as to where development takes place or it doesn't for the large part, unless it is in an environmentally sensitive area, wetland or something, is not our basic decision. But, as I say—and I don't think it is inappropriate for us to raise the issues of concern about sprawl and growth, just so we know they are being considered. If that is the way people want to go, then that is the way the State or the local government makes its decision.

Mrs. NORTHUP. I think in this particular project that there have been a lot of conversations and there has been a lot of resolution about these issues. I think what my questions are is where is the official EPA position—and maybe I should say are you convinced that people in the middle levels and lower level manager levels are aware of what the official position is?

You know, I think my concern is that they are expanding their oversight beyond what their responsibilities of their respective departments are and that they go beyond their areas of expertise and responsibility. Maybe they have long-standing relationships with organizations that have taken a position to block something, and they become as engaged with organizations, you know, in advocacy as just trying to regulate. And I just wondered if you are finding yourself in the position and what position you are taking on any sort of areas where this might be a problem.

Ms. WHITMAN. Well, Congresswoman, when those kinds of issues or concerns are raised to us, we bring them up with the region. We investigate and take appropriate action if it is appropriate to redirect where responsibility lies. Making decisions, we will do it. If we think there is anything inappropriate going on, we will take the action required to address it.

Mrs. NORTHUP. Well, this is the last round of questions for me. I am going back. But, first of all, let me thank you for what I believe is very honest and straightforward testimony. I do believe that people of good will can look at the same facts and have a different conclusion about what they think the right public policy is, but just clarifying what the position of your cabinet is, about relying on science and technology, about laying down clear guidelines to us, we can at least have that debate based on a confidence that we have the information that will help us make those decisions.

I do think that your leadership and the clarity of what—of how you are approaching and your Department is approaching each one of these challenges is very reassuring to me.

I believe that the environment is hugely important to the American people and that they really don't want us to walk away from that. On the other hand, when they start to believe that there are political agendas that are mixed up with this, that there is unproven scientific effort, it undermines our ability to go forth carefully and keep the public trust with us. I am very reassured to hear from you today and just so thrilled, quite honestly, with the straightforwardness of your cabinet's responses.

Ms. WHITMAN. Well, thank you very much. You are absolutely right. You can look at all the issues relative to the environment, and good and honest people can disagree on how best to solve the problems. But as long as we can agree on what the issues are and form some base there, I think we can come to conclusions that will get us to the end of the day. I look forward to working with you.

Mrs. NORTHUP. Thank you.

Mr. WALSH. Mr. Mollohan.

WATERSHED PROGRAMS

Mr. MOLLOHAN. Thank you, Mr. Chairman.

Regarding this $21 million initiative for watersheds, I think Mr. Fattah asked what would be the focus of the initiative, would some of it be on developing intervention strategies or implementation? I would like to follow up and have you elaborate on that. What is this money going to be eligible to be used for?

Ms. WHITMAN. We want a variety of projects. We want urban and rural inland, issues like apoxia in the Gulf. The inland projects obviously affect the watersheds. They affect the bays and the oceans. We are going to have criteria we are considering for the program, will run the scope from the value of the resource, the likelihood of deliverables, of getting real results from the project that is proposed so they can be measurable.

We want to see broad support, broad community support, as I mentioned. We are modeling it on the Charles River and Massachusetts Initiative. One of the things that we have seen and gleaned is that, as we have from a number of other things, is that you really need broad community support. You need local government support, as well as State, but you need the community involved as well. That will make a difference in how we choose them.

The innovation that is behind the project is going to be something that is going to be of importance to us, but we are looking for a variety of both urban and rural programs where we can address the dollars.

MID-ATLANTIC HIGHLANDS PROJECT

Mr. MOLLOHAN. I will just commend you to one area, the Mid-Atlantic Highlands. There has already been a lot of work done in the Mid-Atlantic Highlands. It encompasses watersheds in four States—Pennsylvania, Maryland, West Virginia, and Virginia. A lot of that work has been done in very close cooperation with the EPA and its regional offices.

Ms. WHITMAN. Right.

Mr. MOLLOHAN. And so we are actually excited because we are a little ahead of the curve, and hope that we can be active in that program.

Governor, I join the Chairman and the committee in appreciating your testimony here today and look forward to working with you. Thank you very much for your appearance here today.

Ms. WHITMAN. Thank you.

NATIONAL ACADEMY OF SCIENCE (NAS) REVIEW: DIOXIN REASSESSMENT

Mr. WALSH. Thank you.

A couple weeks ago, I sent a letter to you requesting that the Agency undertake an agreement with the National Academy of Sciences to review the current draft regarding the dioxin reassessment, which I understand is now being prepared for interagency review. In my letter, I noted several areas that I thought it appropriate for NAS to look at closely. I also mentioned that I understand such review may delay the final publication of the reassessment.

I want to state for the record that, given the importance and likely influence this document will have on government and private cleanup efforts, numerous regulatory matters around even on policy questions regarding the U.S. food supply, I believe a slight delay is not only warranted but also perhaps advisable. I truly believe that an NAS review is likely to expedite a subsequent interagency review and will have the added benefit of bringing to bear the expertise of nongovernmental scientists in this area.

It would be ideal if you could respond right now in the affirmative, but I understand that may not be possible. My intent at this time was merely to emphasize my interest in the matter, and if you would like to comment, please feel free to do so.

Ms. WHITMAN. Oh, I certainly will. We are considering a reassessment; we are considering sending it to the National Academy of Sciences. We do recognize this has been a long process, but you have raised a very important question, and the issues are of great concern. At this point I have not made a final decision on that, but that is certainly one of the options that we are looking at very seriously, on how best to go forward with this.

CLIMATE CHANGE: KYOTO PROTOCOL

Mr. WALSH. Thank you.

Just an editorial comment before we close, and this is the end of the hearing, Congressman Fattah mentioned the global warming issue and the Kyoto Protocol, and I would just like to say that I have not been to Shanghai in China, but I have been told by people who visited there that the air is so bad that people wear cloths over their mouths, that you can't see out of windows and buildings. So I have just heard that.

I have not been there myself, but I have been to New Delhi in India about 3 years ago, and I actually lived in Nepal and in India in the Peace Corps a long time ago. The air is worse now than it was when I was there 25 years ago. In fact, between the coal-fired power plants and the coal-fired trains and coal pots that people use to heat their homes and heat their hovels where they live along the

river, not to mention the dung fires and the diesel, the air is dangerous to breathe. In China, I have heard it has a yellowish tint. In New Delhi, it is brown. The air is brown.

I think we have—and I am not crying crocodile tears here. I think we have a moral responsibility to those people that live in those countries to make sure that if their governments aren't prepared to go along with the international accords on clean air that we should force them. Granted, we consume probably more energy than any other country in gross terms and probably per capita, but we also I think do a better job than almost any country in terms of strenuously enforcing environmental codes. So we should use our—and I think we have it—our moral high ground to encourage strongly China and India to participate in any international agreement, because they are making their people very, very sick.

You may give them—as you pointed out, you may give them the opportunity to improve their economy, but it should not be at the expense of their health and their environment. So for what it is worth.

Ms. WHITMAN. Oh, we just got back from India and Thailand last month, and I would concur with the quality of the air there. We do have a memorandum of understanding with the government of India. We are offering them technology and technological help, because there is a very high incidence of lung disease, particularly among women and children because of the fuel they use indoors to both heat and to cook. It is a serious concern.

As we know, we see those pollutants don't stay where they are. They migrate. We are seeing pollutants, in fact, of the salmon off our West Coast, Alaska. For those tribes that have a subsistence living, it is a very real concern. We are seeing pollutants turn up there that we banned years ago that are not coming from us but from other countries. So we all are in this together, and I think we need to understand that.

Mr. WALSH. Thank you. The committee will have additional questions which will be submitted to you for a written response for the record. Your prompt response to these is appreciated.

The committee will stand adjourned until tomorrow, March 13th, at 9:30 a.m. in room H–143, where we will continue taking testimony on the fiscal year 2003 budget submissions of three more agencies under this subcommittee's jurisdiction. Thank you very much for your forthright testimony.

Ms. WHITMAN. Thank you, Mr. Chairman.

Mr. WALSH. The hearing is adjourned.

Questions Submitted for the Record by Chairman Walsh

INDOOR ENVIRONMENT

Question: Would you agree that we are not doing enough in the area of indoor environment research?

Answer: EPA believes that the level of resources in the FY 2003 President's Budget Request for EPA research on indoor environments is appropriate.

The FY 2003 President's Budget Request for EPA includes research on indoor environments as one of many components of larger multi-disciplinary research programs. These programs include efforts aimed at understanding: 1) the sources of indoor pollutants; 2) levels of pollutants people are exposed to indoors, particularly sensitive sub-populations; 3) health effects associated with selected indoor pollutants of concern (biological and chemical); and (4) techniques to reduce risks from indoor contaminants. Specific areas of research include studies to better understand the sources, causes and options to mitigate childhood asthma; research to better understand the impacts of biological and chemical indoor pollutants on human health and approaches to mitigate these impacts; and research to understand the relationship between outdoor and indoor pollutant concentrations and quantify indoor exposures.

In addition, the President's Budget Request includes resources for EPA to perform Homeland Security research. This research effort will enable the Agency to expand its indoor environment research program as described in the answer to the next question.

Chairman Walsh

INDOOR ENVIRONMENT: ADDITIONAL RESEARCH IN SECURITY MATTERS

Question: Given our nation's focus on security matters, do you agree that this is an appropriate, if not ideal time, to pursue additional indoor air research?

Answer: We agree that additional indoor air research should be considered given our nation's focus on security matters, and such research is included as part of the FY 2003 President's Budget Request for Homeland Security research.

EPA plans to work collaboratively with other Federal agencies and the private sector on better ways to both detect and contain biological and chemical warfare agents and bulk industrial chemicals in buildings, and conduct research to improve techniques to decontaminate buildings once a contaminant has been introduced, including evaluating safe disposal of residuals. The Agency will also pursue an aggressive program to transfer all available and new information to those who would need to respond to any future building contamination events. Selected research activities to be pursued include development, testing, and verification of detection devices (technologies will be developed and evaluated for rapid detection and measurement of contaminants to support pre- and post-clean up monitoring and assessment, worker protection, risk assessment, and early warning of contamination events), studies to understand dispersal of biological and chemical contaminants in and around buildings, air cleaning/filtration and decontamination of rooms and HVAC ducts, chemical and physical methods for decontamination of indoor surfaces, risk assessments of decontamination methods, assessment of conditions for safe incineration and disposal of residuals, field testing of new approaches by first responders, and tools for rapid assessment of risks on site.

Chairman Walsh

INDOOR ENVIRONMENT: ADDITIONAL FUNDING FOR RESEARCH

Question: Would you be supportive of, and an advocate for, additional funding for indoor air research, particularly if it can be made without diminishing other research priorities?

Answer: EPA believes that the level of resources in the FY 2003 President's Budget Request for EPA research on indoor environments is appropriate.

Chairman Walsh

ENVIRONMENTAL EDUCATION: PROPOSAL TO TRANSFER PROGRAM FROM EPA TO NATIONAL SCIENCE FOUNDATION (NSF)

Question: Did this proposal originate with EPA or in some other federal agency? If not EPA, where did the proposal originate?

Answer: The proposal originated from the Office of Management and Budget (OMB) as part of the President's FY 2003 budget proposal.

Question: Was EPA fully consulted with regard to this proposal, including asking your opinion whether or not it was an appropriate and meaningful switch that would benefit the program?

Answer: EPA fully supports the President's FY 2003 budget, and participated in the budget negotiation process.

Chairman Walsh

ENVIRONMENTAL EDUCATION: NATIONAL SCIENCE FOUNDATION (NSF) OPERATING PLAN FOR PROGRAMS

Question: Are you aware of what NSF plans to do in operating the program that may differ from how EPA has operated it? If there are meaningful differences, please elaborate on them to the best of your ability

Answer: If the OEE program were to be transferred, the entire division budget and all of its functions would be transferred to the National Science Foundation. EPA has not met with NSF to discuss any type of transition period or strategy.

Chairman Walsh

ENVIRONMENTAL EDUCATION: CHARACTERIZATION OF TRANSFER FROM EPA TO NATIONAL SCIENCE FOUNDATION (NSF)

Question: On more than first blush, this transfer appears to have all the characteristics of "just moving the boxes around. "Is this a fair characterization? If not, please be specific in your response.

Answer: The President's proposal to transfer the Environmental Education Program to the National Science Foundation (NSF) will consolidate similar environmental education activities. The function of Environmental Education is better served by one agency and the NSF is fully capable of administering this function.

Chairman Walsh

MANAGEMENT SCORE CARD SUMMARY

Question: Has the Agency to date taken any specific actions to address this "stop light" scorecard submitted by OMB? Do you plan to take any such actions using fiscal 2002 appropriations?

Answer: The Agency has taken specific actions to address its scores on the Administration's Executive Branch Management Scorecard which currently gives the EPA two (2) yellow scores and three (3) red scores. Because the Scorecard process is closely aligned with existing Agency management priorities, the work EPA has been doing and proposes to continue doing to promote effective management support the progress made toward better Scorecard scores. These actions are part of the Agency's ongoing efforts to manage for results, provide excellent customer service and work with stakeholders to establish priorities and achieve goals.

As another example, EPA received a "yellow light" score for Budget and Performance Integration and is working closely with OMB staff to further identify areas for improvement. The score in this important management category reflects EPA's focus on managing for results and integrating resources and performance in Agency budgeting and accountability processes and reports. EPA is using 2002 resources to determine how to further improve management for results, revise the Agency's strategic plan, consider reducing the number of Agency strategic goals, and enhance cost and performance information provided to decision-makers.

Chairman Walsh

MANAGEMENT SCORE CARD SUMMARY: PRIORITY OF OMB'S IDENTIFIED CONCERNS

Question: May this scorecard in fact pose a potential problem to you whereby certain OMB identified concerns are assigned a higher priority than they otherwise would, or should be by EPA?

Answer: The Agency views the Administration's Executive Branch Management Scorecard as a framework to promote progress toward broad areas in which the government needs improvement and as an effective tool for communicating progress across Federal agencies. The process of determining scores and communicating their importance to the public supports dialogue within the government and with our key stakeholders on good management. The Scorecard areas highlight good stewardship of taxpayer resources and support the President's Management Agenda themes of focusing on citizens rather than bureaucracy, being accountable for results, and promoting of market-based solutions.

The Office of Management and Budget (OMB) staff is working with EPA on how to best implement the Scorecard. Discussions with OMB staff have resulted in a shared understanding of how the criteria work together to promote good management. The Scorecard is a summary that allows us to integrate perspectives from other important sources of management improvement, such as General Accounting Office and Inspector General Audits, into a simple, easily-understood tool for monitoring progress and achieving results. We do not believe the scorecard poses a problem for the Agency; rather it is the tool the Administration is using to measure agency progress in meeting the President's Management Agenda.

Chairman Walsh

MANAGEMENT SCORE CARD SUMMARY:
KNOWN PROBLEMS ON AGENCY PRIORITY LIST

Question: To the extent specific, known problems exist, is not the Agency's management team better able to judge where such problems might fit on a priority list of the Agency?

Answer: EPA has a strong management integrity program under which Agency managers develop and maintain effective management controls over their programs and resources and systematically evaluate those controls and identify, correct, and report on management control problems. EPA's senior leadership meets annually with the Office of the Inspector General along with the Office of Management and Budget and the General Accounting Office to hear their views on new and ongoing management issues that may impede the accomplishment of the Agency's mission. EPA's senior leadership also meets late in the year to discuss progress in correcting existing management problems and to make recommendations to the Administrator on closing corrected weaknesses and declaring new weaknesses. The Administrator provides assurance to the President that the Agency has appropriately identified management weaknesses, made planned progress on existing weaknesses, and put effective plans in place to resolve newly identified weaknesses. The state of the Agency's management controls is discussed and certified by the Administrator in the Agency's Annual Report.

The Agency's senior management team is accustomed to taking responsibility for identifying management challenges and setting priorities for their resolution. One advantage of the Executive Branch Management Scorecard is that it communicates a common set of priorities across government. The areas outlined in the Scorecard are broad enough to encompass the range of management areas where management challenges might occur in any organization. The Scorecard organizes thinking about larger-scale problems that are not unique to a given department or agency, but which need to be addressed by many.

Chairman Walsh

MANAGEMENT SCORE CARD SUMMARY:
IG DETERMINATION OF MATERIAL WEAKNESSES

Question: Similarly, is not the IG in a better position to determine what and where specific, material weaknesses exist at the Agency? Indeed, isn't that her job?

Answer: EPA has a strong management integrity program under which Agency managers develop and maintain effective management controls over their programs and resources and systematically evaluate those controls and identify, correct, and report on management control problems. EPA's senior leadership meets annually with the Office of the Inspector General along with the Office of Management and Budget and the General Accounting Office to hear their views on new and ongoing management issues that may impede the accomplishment of the Agency's mission. EPA's senior leadership also meets late in the year to discuss progress in correcting existing management problems and to make recommendations to the Administrator on closing corrected weaknesses and declaring new weaknesses. The Administrator provides assurance to the President that the Agency has appropriately identified management weaknesses, made planned progress on existing weaknesses, and put effective plans in place to resolve newly identified weaknesses. The state of the Agency's management controls is discussed and certified by the Administrator in the Agency's Annual Report.

The Agency's senior management team is accustomed to taking responsibility for identifying management challenges and setting priorities for their resolution. One advantage of the Administration's Executive Branch Management Scorecard is that it communicates a common set of priorities across government. The areas outlined in the Scorecard are broad enough to encompass the range of management areas where management challenges might occur in any organization. The Scorecard organizes thinking about larger-scale problems that are not unique to a given department or agency, but which need to be addressed by many.

Chairman Walsh

BROWNFIELDS: GRANTS TO STATES, TRIBES AND LOCALITIES

Question: Can you explain the process of how the specific numbers of grants were agreed upon through the following questions: Are the numbers based on submissions or requests made from the states, tribes and localities, or are they there more for illustrative purposes?

Answer: The President's FY 2003 request for Brownfields is $200 million which is an increase of $102 million above the FY 2002 Enacted level. The additional $102 million will support the redevelopment and revitalization of brownfields communities by providing additional funding for new and supplemental assessment demonstration pilots, brownfields cleanup revolving loan fund (BCRLF) pilots, cleanup grants, direct funding to States and Tribes to support the State voluntary cleanup programs, and targeted assessments. The FY2003 President's budget request includes $50 million in direct funding to States and Tribes to build and support State brownfields programs.

The Government Performance and Results Act goals and measures as targeted in the FY 2003 request are as follows:

– Assessment Pilots:	74 new sites and 52 existing sites
– BCRLF pilots:	30 communities

In addition, the Agency anticipates awarding ten new job training pilots. Numbers of grants in the OMB submissions were projected based on the statutory funding limits in each grant category:

– Assessment Pilots:	$200,000
– Direct Grants	$200,000
– BCRLF	$1,000,000
– Job Training, Research, and technical assistance	15% of total amount appropriated

Distributions between categories of grants will be based on experience under the Brownfields Economic Development Initiative.

The Agency grant application guidelines will be published in Fall 2002. New funding is requested to be available for FY2003.

Chairman Walsh

BROWNFIELDS: ROLE OF STATE, TRIBES AND LOCALITIES IN BUDGET FORMULATION PROCESS

Question: Specifically, what role, if any, did these three entities play in the budget formulation process?

Answer: The FY2003 request was prepared based on the Agency's experience since 1995 under the Brownfields Economic Redevelopment Initiative. EPA has worked closely with States, tribes and local governments and that experience has been reflected in the current budget request.

Chairman Walsh

BROWNFIELDS: EXPECTATION OF COMMUNITIES

Question: If the numbers are even somewhat illustrative, do you risk raising expectations in communities that may not be reachable?

Answer: Given GAO's estimate that more than 450,000 brownfields properties exist, there are many more brownfields than EPA can expect to address. The Agency will, as the recently passed Act directs, "establish a system for ranking grant applications received" to ensure a fair and nationally competitive process for the determination of grant awards. In addition, the Act provides support for State and Tribal response programs and expands activities available for funding of those programs. This support will assist States and Tribes in building capacity and provide an additional means for assisting communities. Further, the Act's liability reforms may be anticipated to provide a stimulus for increased assistance to communities from private entities complementing the Agency's grant support.

Chairman Walsh

BROWNFIELDS: GRANT DETERMINATION

Question: Were the numbers determined based on a priority of needs and projects as determined by the Agency, or did you attempt to spread available funds to as many grant areas as possible?

Answer: The budget submission for FY2003 was prepared based on the experience the Agency has gained under the Brownfields Economic Redevelopment Initiative since 1995. The EPA anticipates adjustment will be made to future budgets to ensure the greatest effectiveness in implementation of the Act, based on the submissions of grant applications in the first year.

Chairman Walsh

BROWNFIELDS: MOVING FUNDS TO GRANT AREAS

Question: How flexible do you expect to be in moving funds from one grant area to another?

Answer: The EPA anticipates adjustment will be made to future budgets to ensure the greatest effectiveness in implementation of the Act, based on the submissions of grant applications in the first year.

Question: Some states and localities have much more numerous and severe Brownfields problems than others. Is it safe to assume that the "problem" areas will likely see a disproportionate share of the available funds, or do you expect to try to spread all funds around on a somewhat equal basis?

Answer: The Act requires the Administrator to "establish a system for ranking grant applications received." EPA will use the ranking criteria to ensure a fair and nationally competitive process for the determination of grant awards. For example, among the criteria mentioned under Sec.104(k)(5)(C) of the Act are those which ensure the identification and reduction of threats to human health and the environment, ability of a grant to meet the needs of a community, and the assurance of a fair distribution of funding between urban and "non urban" areas.

Chairman Walsh

BROWNFIELDS: GRANT RECIPIENT PROCESS

Question: Can you explain for the Committee the general process the Agency will employ to determine who the recipients of the grants will be?

Answer: EPA is conducting listening sessions and other outreach activities prior to developing implementation policies for this new authority. Grant application guidelines will be published in Fall 2002. Grants awarded under the Act will be awarded through a nationally competitive process specified in new Sec. 104(k) (5) (C) similar to the process employed under the current program.

Chairman Walsh

BROWNFIELDS: TIMING OF GRANT AWARDS

Question: From the time this Appropriations bill is signed into law, how long do you anticipate it will be before the first grants go "out the door"?

Answer: Grant application guidelines will be published in Fall 2002. The new funding is requested to be available in FY2003. EPA will begin making grant awards with the new funding in FY2003.

Chairman Walsh

BROWNFIELDS: SPECIFIC ALLOCATION FOR USE OF REMEDIATED SITES

Question: Will you make or did you consider making any special allocation for Brownfields projects which are part of a broader plan to use the remediated site for low or moderate income housing construction or redevelopment?

Answer: No, the Act requires the Administrator to "establish a system for ranking grant applications received." EPA will use the ranking criteria under Section 104 (k)(5)(c) to ensure a fair and nationally competitive process for the determination of grant awards.

Chairman Walsh

BROWNFIELDS: GRANT ISSUANCE FOR HOUSING CONSTRUCTION OR DEVELOPMENT IN REMEDIATED SITES

Question: Given the concerns with environmental justice-related questions, should reuse of remediated sites for housing construction or redevelopment be a primary consideration for EPA in issuing grants, or should such decisions be left completely up to the applicant communities?

Answer: The Act requires the Administrator to "establish a system for ranking grant applications received." There are no criteria which specifically reference housing; however, new Sec. 104(5)(C) criteria do seek to ensure that the grant provides for involvement of the local community in the process of making decisions relating to cleanup and future use of a brownfields site. Other criteria reference the identification and reduction of health threats and the needs of the community with an inability to draw on other sources of funding. EPA will use all of the ranking criteria to ensure a fair and nationally competitive process for the determination of grant awards.

Chairman Walsh

BROWNFIELDS: BASIS OF GRANT DECISION MAKING PROCESS

Question: Whether or not housing-related projects are given higher status in the grant decision-making process, are there other types of projects– such as those with economic development as a goal–considered to be of higher priority by EPA than others, or are all projects judged on a somewhat equal basis?

Answer: The Act requires the Administrator to "establish a system for ranking grant applications received." EPA will use the ranking criteria under Section 104 (k)(5)(c) to ensure a fair and nationally competitive process for the determination of grant awards.

Chairman Walsh

BROWNFIELDS: CRITERIA FOR DETERMINING PROJECT FUNDING

Question: If all projects are judged on a somewhat equal basis, how will you determine which projects receive funding and which do not? In other words, what are your criteria for making such determinations?

Answer: The Act requires the Administrator to "establish a system for ranking grant applications received." Grant application guidelines will be published in Fall 2002. Among the criteria mentioned under Sec.104(k)(5)(C) of the Act are those which ensure the identification and reduction of threats to human health and the environment, ability of a grant to meet the needs of a community, and the assurance of a fair distribution of funding between urban and "non urban" areas. EPA will use the ranking criteria to ensure a fair and nationally competitive process for the determination of grant awards.

Chairman Walsh

BROWNFIELDS: ROLE OF OTHER FEDERAL AGENCIES IN ASSESSING AND REMEDIATING BROWNFIELDS

Question: Based upon the new authorities and programs provided by EPA last year, is it your view that the Agency has the primary responsibility for assisting states and localities in assessing and remediating Brownfields?

Answer: The Act provides EPA with the lead in assisting communities.

Question: What role, if any, should other agencies such as HUD have in support of Brownfields redevelopment?

Answer: New Sec. 104(5)(A)(ii) of the Act directs EPA to coordinate with other Federal agencies "to assist in making eligible entities aware of other Federal resources." Over the last 5 years, EPA has worked with more than 20 federal agencies to coordinate support for local brownfields efforts including HUD, the Departments of Commerce, Interior, and the Treasury to name a few. Examples of that coordination include Memoranda of Understanding with these and other Federal Agencies and in the 28 Brownfields Showcase Communities that serve as models of interagency collaboration.

Chairman Walsh

ENDOCRINE DISRUPTOR VALIDATION COSTS: ANTICIPATED VS. ACTUAL FROM 1999 TO 2001

Question: Please provide for the Record data which describe the anticipated versus actual costs of standardizing and validating the screens and tests recommended by EDSTAC for which standardization and validation activities have begun for fiscal years 1999 through 2001.

Answer: As shown in the figure below, Congress appropriated a total of almost $27 million to OPPTS during FY99/00/01 to begin standardizing and validating the endocrine disruptor screens and tests recommended by EDSTAC. The Agency has made significant advances on this program during FY99-FY01. However, the pace of the validation program to date has been slowed somewhat by the need: to establish a major support contract for pre-validation/validation studies (awarded in January 2001); to resolve several unanticipated scientific issues; and to create the Endocrine Disruptor Methods Validation Subcommittee (EDMVS) to provide advice and counsel to the Agency (officially established in October 2001). The figure below shows the delay in expenditure/obligation of appropriated FY00 funds through FY01.

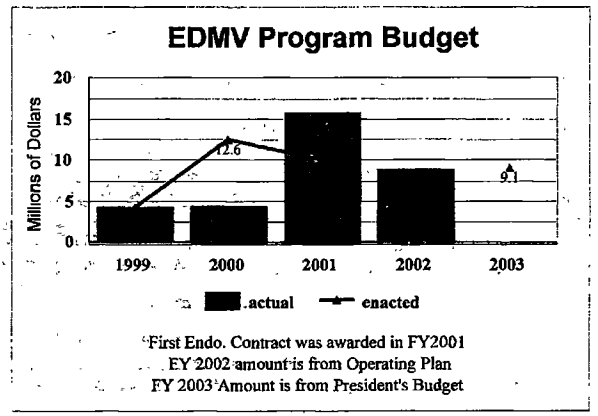
In order to achieve progress while the Agency was soliciting and procuring contractor services, some studies were initiated under Inter-Agency Agreements with the National Institute of Environmental Health Sciences of the National Institutes of Health and with the Food and Drug Administration's National Center for Toxicological Research. Even with these complications, the Agency was able, prior to the end of FY01, to initiate studies (i.e., literature review and/or pre-validation study) on all Tier 1 and alternate Tier 1 assays recommended by EDSTAC, as well as studies on most of the recommended Tier 2 assays.

Because many of these projects/studies, as well as those which have been initiated in FY02, have not yet been completed, it is not possible at this point in time to provide reliable comparisons of anticipated versus actual costs for most studies. However, the actual cost to date information that is available for several studies indicate that the Agency has underestimated actual costs on some but not all studies. Reasons for increased costs include:

- inclusion of additional endpoints and animal feeding procedures recommended by EDMVS, as well as an EDSTAC Subcommittee recommendation to increase the number of chemicals for testing.

- EPA underestimated the amount of literature that needed to be reviewed, and also the complexity and level of detailed analysis required to adequately compare and contrast the various candidate protocols, to support development of Detailed Review Papers (DRP), which, among other things, help explain the scientific principles used for the Tier 1 and Tier 2 assays.

•unforeseen problems with protocols and a finding by NIEHS/ICCVAM that no adequate validation studies have been completed for the estrogen and androgen binding assays, which will require a more costly "round robin" validation study.



Chairman Walsh

ENDOCRINE DISRUPTOR VALIDATION COSTS: FUNDS FOR FY 2002 AND FY 2003 REQUEST

Question: Further, based on the Agency's best experience, please indicate whether funds provided for fiscal year 2002 and requested for fiscal year 2003 are adequate to perform this work properly.

Answer: As described above, the pace of the validation program to date has been slowed somewhat by the need to:

1) establish a major support contract for pre-validation/validation studies;
2) resolve several unanticipated scientific issues; and
3) create the EDMVS to provide advice and counsel to the Agency.

These three activities have been completed, and thus, we are now poised to fully engage in the design and conduct of the pre-validation and validation studies. We believe that the funds appropriated in FY02 and the requested funds in the President's FY03 Budget will adequately cover projected pre-validation and validation activities planned for these two fiscal years. However, the major costs for the validation program will come in the next several years of the program (when validation of the more complicated and time-consuming Tier 2 assays would be underway).

Chairman Walsh

ENDOCRINE DISRUPTOR VALIDATION COSTS: ADVICE OF ENDOCRINE DISRUPTOR METHODS VALIDATION SUBCOMMITTEE (EDMVS)

Question: Finally, please indicate for the Record how advice from the Endocrine Disruptor Methods Validation Subcommittee (EDMVS) provided to date is requiring adjustments in your validation plans and their associated costs.

Answer: Frequently, increasing stakeholder discussion and input means longer lead times and less predictable project planning. However, the enhanced transparency and wider participation can help avoid unanticipated implementation problems or analysis gaps later in a project's cycle. The time required for effective interaction with the EDMVS can sometimes add several months to a given step (e.g., initiation of a pre-validation study for a specific assay) because background information and issues must be prepared and distributed to the Subcommittee for their consideration at a public meeting in advance of EPA decision making.

In addition, the EDMVS raises issues or provides advice which EPA must address/consider prior to initiating work. These issues and advice are useful but can alter schedules and can mean a reprioritization of funds if the Agency decides the issues need to be incorporated into the project, involving expansion of the scope or size of a given study. As an example, initiations of some of the pubertal pre-validation studies were delayed several months to bring the issues to the EDMVS and subsequently to address some new issues raised by the EDMVS. In addition, additional chemicals were added to the pubertal pre-validation studies for testing as a result of EDMVS advice, raising costs significantly. Similar impacts will likely be realized as additional study plans for other assays are presented to the Subcommittee.

Chairman Walsh

AVAILABILITY OF INFORMATION RELATED TO THEORETICAL OR POTENTIAL ACCIDENTS AT INDUSTRIAL SITES

Question: Within the last three years, EPA put into place a policy by which certain information related to theoretical or potential accidents which could occur at industrial sites in this country is made available to the public. Following the events of September 11, 2001, has the Agency revisited its policy in this regard? If so, please provide specific details as to the discussions which have occurred on the subject.

Answer: Not an EPA policy but a congressional mandate, Section 112(r) of the Clean Air Act Amendments of 1990, requires that worst-case scenarios for chemical accidents at industrial and other facilities, as part of accident prevention plans, be reported and made available to the public. The plans are known as Risk Management Plans (RMP). EPA's rulemaking to implement that mandate called for such reporting to come to EPA by June 1999, to be made available on the internet. A portion of the RMP information is worst-case and alternate chemical accident scenarios referred to as "off-site consequence analysis" information or OCA. EPA had decided the previous fall that worst-case and alternate accident scenarios, or OCA information, would not be included in the database on the Internet because of concerns raised about the possibility of terrorist interest in the information. The remainder of the database, called RMP*Info, was placed on the Internet as part of EPA's information warehouse. In August 1999, Congress enacted an amendment to the Clean Air Act (CSISSFRRA, the "Chemical Safety Information, Site Security and Fuels Regulatory Relief Act"), making certain off-site consequence analysis information exempt from FOIA and requiring EPA, together with the Department of Justice, to issue regulations making the information available to the public in a limited manner. Those regulations were issued in August 2000.

After September 11, 2001, EPA temporarily removed the existing RMP*Info (which did not contain OCA Information) from the Internet. RMP*Info on the Internet (temporarily unavailable since 9-11, as noted above) is EPA's means of public distribution of Risk Management Plans which do not contain Off-Site Consequence Analysis (OCA)Information, as defined in CSISSFRRA. Other means of public access to RMP Information with OCA is available through Reading Rooms, established in the EPA/DOJ rule of August 2000, noted above. The reading rooms, which allow limited access to certain numbers of RMPs, are unchanged and remain open. RMP*Info remains unavailable on the Internet while EPA assesses the sensitivity level of the information available in RMP*Info.

EPA has been in discussions with the Census Bureau, Department of Justice and other federal agencies about public access in light of the events of September 11, 2001. The direction of the discussions is how to appropriately provide the public the information they have a right to, while at the same time protecting the U.S. interests against terrorism. The targeted outcome is a protocol for defining that balance more clearly. As well, EPA testified before the U.S. House of

Representatives Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure concerning the issue of right-to-know after September 11.

Question: Does the Agency intend to modify its policy in any way? If so, what will the Agency's new policy be in this regard?

Answer: The Agency is in the process of assessing all of its databases and information resources that it makes available to the public on the Internet in light of security concerns and in concert with homeland defense planning. In the meantime the information is available in paper copies through readings rooms located throughout the country. The Agency is also preparing a response to the March 19, 2002, memorandum from Andrew H. Card, Jr., Assistant to the President and Chief of Staff (the Card Memorandum), which addresses the need for heightened awareness when dealing with classified or otherwise sensitive information. Through these efforts the Agency will be assessing the appropriate process for providing information to the public. Consideration of RMP*Info, the RMP database, is a part of that examination. This Agency process includes consideration of tiered approaches to providing information for EPA constituencies; availability of information already on the internet; accuracy of information; and FOIA exemptions. The "tiered" approach refers to providing more general information to a wide area of the public, with more specific information available to a narrower area of the public. Additional approaches could include limiting the number of persons who could have access to certain information; surgically excising sensitive information from some databases, imposing validation hurdles, and others.

Question: Does implementation of a new policy in this regard require any legislative relief for the Agency?

Answer: Seeking legislative relief may be a part of proposals as they are developed.

Question: When are any such changes likely to be fully implemented?

Answer: This is an evolving process and no specific dates have been set as of yet. The Agency has been carefully screening its information, and assessing issues and alternatives. Agency staff and managers are already more aware of the importance of thinking about new homeland security concerns for sensitive information. Other changes will result from further analysis and guidance on handling, safeguarding, and releasing information. For example, the Agency is developing guidance in response to the recent White House/DOJ memoranda on homeland security. The recent White House/DOJ memoranda refer to a memorandum from Andrew Card, Chief of Staff at the White House, and an accompanying memo from officials at NARA and DOJ. The Card memorandum directs departments and agencies to re-examine current measures for identifying and safeguarding sensitive documents related to homeland security, and to review their records management procedures and, where appropriate their holdings of documents, to ensure that they are acting in accordance with the guidance provided in the NARA memorandum (which names and defines certain kinds of information). Agencies

are to report the completion or status of this review to the White House. We expect EPA the guidance to be distributed as part of EPA's response to the White House/DOJ memoranda. Agencies will report back to DOJ on their reviews regarding homeland security by mid-June.

Chairman Walsh

INSPECTOR GENERAL GOALS TO ADDRESS MAJOR EPA PROBLEMS

Question: For FY 2000, Congress appropriated an additional $3 million to EPA's Office of the Inspector General "to address major problems at EPA through the development of additional audits of grants and assistance agreements, and to form a new program evaluation unit to analyze environmental outcomes more effectively." How much progress have you made in achieving those goals?

Answer: The specific products (grant work) and new product line development (program evaluation) requested by Congress have necessitated dramatic organizational changes within the Office of Inspector General (OIG) over the last couple of years. However, we have made progress.

The OIG conducted a series of grant (assistance agreements) audits that provide a more global perspective of the program's operation. We made recommendations to EPA on specific areas and suggested changes to improve grants administration. For example, in our audit of Competition in Awarding Assistance Agreements, we determined that EPA did not have a policy requiring competition for awarding about $1.3 billion of discretionary assistance funding, even though such a policy would be beneficial and is used by other federal entities. In response to our report, EPA drafted a policy that will require competition for certain types of agreements unless program offices provide a credible written justification for a noncompetitive award. Additionally, our audit of Surveys, Studies, Investigations, and Special Purpose Grants, disclosed that EPA had no assurance that money used for such assistance agreements was awarded for useful projects and contributed to achieving EPA's mission of protecting human health and the environment. In response to our report, EPA agreed to work with the program offices to measure the results of grant awards (focus on outcomes not outputs) and improve guidance as well.

We also established our Office of Program Evaluation. We began our new business line partnering with temporary staff from EPA and initiated four pilot studies (air, water, hazardous waste and research). The framework developed in these projects is being used as the foundation for the current program which is now supported by permanent OIG staff headed by an Assistant Inspector General. The tools used to evaluate program designs are being proposed by three Assistant Administrators as the model for integrating EPA's budget, the requirements of the Government Performance and Results Act, and program activities. Despite this success, we are not where we hoped we would be by now in this endeavor for the reasons described below.

Question: Are there any obstacles preventing you from fully achieving your organizational goals?

Answer: The primary challenge the OIG faces in achieving our organizational goals centers around staffing issues, particularly the skills mix of our existing staff. In GAO's recently revised draft of Government Auditing Standards, two new standards specifically address the

need for auditing organizations to maintain a competent workforce with a variety of skills such as accounting, law, engineering, social sciences, public administration and information technology. This same challenge exists in part with regard to our investigative staff. Our goal is to replace certain positions with new employees possessing appropriate skills related to our product lines and matrix organization, while ensuring that no deficit exists at any time in our key areas or management positions.

Chairman Walsh

NEW EPA PROCESS FOR REGULATORY REVIEW BY OPEI

Question: Last year you announced a new EPA process for regulatory review by the Office of Policy, Economics, and Innovation (OPEI). Can you tell us about this process and how it is working?

Answer: Developing environmental regulations is one of EPA's principal tasks. These actions must be based on the best possible scientific, economic, legal and policy analyses. In fact, much of EPA's environmental success and organizational credibility is directly linked to the quality of this work. Recognizing the importance of this activity, EPA recently re-evaluated its regulation development process. In April 2001, I established a 45-day Task Force to evaluate the existing regulation development process. The Task Force submitted a list of recommendations to me and I endorsed those recommendations in August, 2001. While supporting the existing process, the Task Force developed in 1994 but identified four areas for potential improvement: better science and economic analysis; broader consideration of policy options; greater accountability; and better management of significant non-regulatory decisions.

- *Strengthen the quality and consistency of the science and economics supporting EPA decisions.* The Agency has established processes to better integrate our scientists and economists throughout the regulatory process. The new processes emphasize early consideration and planning for analytic needs. I have also named the Assistant Administrator for the Office of Research and Development (ORD) as the EPA Science Advisor and the Associate Administrator for the Office of Policy, Economics and Innovation (OPEI) as the Economics Advisor to provide leadership and senior-level consultation on these issues.

- *Thorough consideration of reasonable policy options.* The Agency is examining a wider range of regulatory options, and consulting more effectively with Agency advisory groups; state, local and tribal governments and other external stakeholders. We are strengthening the internal integration of the Agency's sectoral, small business, community-based, and innovation policy analyses with its regulatory policy development.

- *Greater management accountability.* Our regulations can only be as good as our system for developing them. While individual program offices (e.g., Office of Air and Radiation) will continue to have primary responsibility for developing quality regulations, to support development of priority actions, representatives of cross-media offices will focus on science (ORD), policy and economics (OPEI), legal analysis (Office of General Counsel), and enforcement and compliance (Office of Enforcement and Compliance Assurance). We are also revising our internal regulation development tracking system to improve managerial accountability.

•*Better management of significant non-regulatory activities.* EPA is reviewing non-regulation activities to identify important policies, guidance, and strategies that should receive the same rigorous review as regulations. We are examining the regulation development process to decide if any adjustments are needed to make it fit our non-regulatory action agenda.

Chairman Walsh

RULES REVIEWED UNDER NEW PROCESS

Question: One of my concerns is that a lot of rules were signed at the end of the last Administration and are still pending at EPA. These rules have not received the type of review or scrutiny that is needed. Can you give me some assurance that these rules will be reviewed under this new process prior to going to OMB?

Answer: Of EPA's 67 actions that were held and pending, four remain at EPA. The titles of the four actions are:

1. Oil Pollution Prevention Regulation
2. NPDES Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows
3. Ocean Discharges Criteria Revisions
4. Water Quality Standards for Indian Country Waters

Each of these actions will be, or is being, reviewed under the new regulatory review process.

Chairman Walsh

RULES BASED ON SOUND SCIENCE AND REALISTIC COSTS AND BENEFITS

Question: Just to follow-up, we have heard that EPA staff has indicated that some of these so-called "midnight rules" were "too far along" to be subject to EPA's new regulatory review process. It seems to me that these are exactly the rules that should be subject to an extensive review as many were prepared hurriedly. They are not too far along in the process if they are still at EPA. I want a commitment that you will have these rules looked at very carefully to ensure that they are based on sound science and that the costs and benefits are realistic.

Answer: All of EPA's rules that were either withdrawn from OMB review under the Daniels memo or withdrawn from pending publication under the Card memo, has been extensively reviewed to assure they are based on sound science and realistic costs and benefits. All of these rules have subsequently been approved for publication, with the exception of the 4 rules that are still under review as noted in the answer to the previous question.

Chairman Walsh

EXECUTIVE ORDER 13211: AGENCY IMPLEMENTATION & IMPACT ASSESSMENT

Question: As Congress debates energy legislation which many consider a priority issue for our nation, one of the actions that President Bush has taken is to put into effect E.O. 13211. The executive order is aimed at ensuring that agencies "appropriately weigh and consider the effects of the Federal government's regulations" on energy. Agencies must conduct an analysis of the impact that rules have on energy supply and production, and detail any "significant adverse impact." Certainly there have been concerns raised that some of EPA's rules adversely impact our nation's energy supplies. Can you tell me how EPA is implementing this requirement?

Answer: After extensive cross-Agency deliberation, EPA issued preliminary Agency guidance on this Executive Order based on OMB's draft guidelines. The Agency goes beyond the requirements of the Order and by addressing the issue in the preambles of *all* our rules and also considers the special needs of local communities.

Question: How are energy impacts being assessed?

Answer: EPA stipulates that all "economically significant" rules under Executive Order 12866 may have potential "significant adverse effect on the supply, distribution, or use of energy", and we conduct appropriate analyses based on OMB's draft guidelines.

Question: Is every rule being looked at for energy impacts by your policy office before going to OMB?

Answer: Yes.

Question: Is your staff working closely with the Department of Energy to assess impacts?

Answer: Yes, EPA works with DOE in assessing impacts, to the extent appropriate, based on the severity of the impacts and other factors relevant to individual rules.

Chairman Walsh

REGIONAL ACCOUNTABILITY OF ENVIRONMENTAL POLICIES

Question: One continuing issue we hear about is that some Regional offices continue to create their own environmental policies without any accountability or consistency with EPA headquarters policy. Can you please tell me how you plan to bring more accountability to the Regions so that we don't have individual problem situations cropping up?

Answer: Accountability is a very important issue for EPA. Under the Government Performance and Results Act (GPRA), we are continuously working on utilizing and improving our measures to ensure programmatic and environmental accountability, as well as consistency between headquarters and the regions. Based on recommendations from a workgroup I commissioned to look at ways to increase accountability, the Deputy Administrator is conducting a series of meetings with each of the Regional offices, to discuss progress under GPRA and to ensure that there is consistency across the nation with regard to our environmental programs.

At the same time, it is critical that EPA and the states continue to encourage innovative approaches to improve our nation's environment -- approaches that can be more cost-effective, less adversarial and contentious, and result in more beneficial environmental impacts. These innovations may vary from region to region and state to state.

Question: How do we get the Regions on one page in implementing environmental regulations?

Answer: There are a number of ways that policies and regulations are communicated throughout EPA, including regular national program meetings (air, water, waste, pesticides, enforcement) and meetings of senior Agency officials (Regional Administrators and Assistant Administrators). Annual Operating Guidance is issued by EPA that outlines the programmatic goals and explains the expectations for the coming fiscal year. National program managers conduct regional reviews to assess progress in implementing programs. EPA also meets regularly with State Environmental Commissioners and state associations, such as State and Territorial Air Pollution Program Administrators and Association of State and Territorial Solid Waste Management Officials, to discuss environmental progress and issues. EPA encourages innovation in achieving environmental progress, and supports Performance Based Management, which allows a variety of approaches as long as the environmental end point is achieved.

Question: What do you perceive to be the role of Headquarters in ensuring consistent implementation of policy?

Answer: Headquarters establishes national goals under GPRA, in conjunction with states and tribes; issues regulations and guidance; monitors and reports progress against goals; and

conducts program reviews. In addition, many conferences and workshops are sponsored to communicate agency goals, regulations and policies, and to educate the regulated community and other regulators on Agency policy.

Question: With your background, administrator Whitman, your focus is one of providing the States the authority to implement environmental programs. Unfortunately, we are still hearing about individual Regions that continue to override State policies and decisions, including the continuing issue we have with Region IX. We specifically put language in the appropriations bill to address this concern about Region IX last year and understand in the water quality area that Region IX is continuing to override State TMDL decisions, including now Arizona and California. What do you need to do to get the message across that Region IX cannot continue to override State authority in implementing environmental programs? What are you doing to ensure that this is not happening in other Regions?

Answer: EPA is committed to respecting the important role that each state plays in the administration of the TMDL program. Likewise, we must also carry out the responsibilities given to the Agency as enacted in 1972 under section 303(d) of the Clean Water Act (CWA). This section of the CWA requires states to identify waters not meeting state water quality standards, set priorities for TMDL development, and develop a TMDL for each pollutant for each listed waters. The Act directs EPA to approve or disapprove state submissions and, if disapproved, to act in lieu of the state. The effective management of the TMDL program requires that both parties fully execute their specific responsibilities to assure that these responsibilities are met. To respond to the language included in the FY 2002 House appropriations bill, EPA has initiated a number of actions to assure that all Regional offices work in an effective and consistent manner to identify impaired waters, develop and implement TMDLs, and encourage the full participation of all stakeholders.

First, EPA Headquarters has worked with all of the states to develop a consolidated assessment and listing methodology guidance. This guidance will assist states in the design and implementation of their monitoring programs, and in the analysis and interpretation of the data and information used to make water quality standards attainment determinations.

Second, to provide a greater degree of national consistency in the process to develop and approve the lists of impaired waters, EPA is providing to all Regions, states, territories, and authorized tribes guidance for integrating the development and submission of 2002 section 305(b) water quality reports and section 303(d) lists of impaired waters.

Third, EPA Headquarters has distributed to each Region a framework to facilitate the review and approval decisions for each state's section 303(d) submission in order to promote national consistency in making those decisions. This framework assures that each Region evaluates all of the required elements of each state's submission in a uniform and predictable manner.

Fourth, EPA Headquarters has also distributed to every Region a template for reviewing and approving each TMDL submitted by a state. This template will assist all Regions in assuring

that all required elements of each TMDL are submitted in an adequate manner before an approval action can be completed.

Additionally, as you may know, EPA is currently considering revisions to its TMDL regulations. One goal of such revisions would be to ensure national consistency in the implementation of the Clean Water Act's section 303(d) provisions.

The Region 9 guidance issue regarding permitting prior to the completion of a TMDL has been resolved. The clear need to clarify norms for water quality-based permitting is what led Region 9 to draft, at the request of regulated permit holders, a guidance document for the preparation of NPDES permits. The guidance document, though circulated publicly, was not finalized at the direction of EPA Headquarters. In June of 2000, EPA Headquarters directed the Regional offices to make no new policy in this area until the issues were addressed and policy could be made at the national level.

EPA Region 9 has never overridden a state TMDL decision, and has very rarely disagreed with any aspect of a state's section 303(d) listing decision. Section 303(d) requires EPA to review and act upon state-adopted TMDLs and lists of waters needing TMDLs. EPA Regional offices routinely work with states and comment on early draft TMDLs and impaired waters lists in order to help ensure that state-adopted TMDLs and lists meet all federal requirements and can be approved by EPA pursuant to section 303(d). Region 9 has approved every TMDL submitted by its states and has established several dozen TMDLs developed in partnership with its states in order to meet consent decree deadlines. EPA strongly supports the state TMDL programs in Region 9 through a combination of funding assistance (more than $6 million per year in grants and in-kind contract support), technical assistance, training and outreach.

Since 1992, Region 9 has reviewed and fully approved 18 of 22 state and territorial listing decisions under section 303(d). Region 9 partially approved and partially disapproved the California section 303(d) lists in 1992, 1994, and 1998, and added a small number of waters and pollutants to these lists because the state listing decisions did not meet Federal requirements. California's 1998 and proposed 2002 lists include all the added waters and pollutants included in Region 9's previous listing decisions. In response to a 2001 Federal court order that found that Region 9's approval action violated the Administrative Procedure Act, Region 9 approved part of Hawaii's 1998 section 303(d) list, overturning its earlier approval of the entire list.

Chairman Walsh

REGION OVERRIDING STATE AUTHORITY IN IMPLEMENTING ENVIRONMENTAL PROGRAMS

Question: With your background, Administrator Whitman, your focus is one of providing the States the authority to implement environmental programs. Unfortunately, we are still hearing about individual Regions that continue to override State policies and decisions, including the continuing issue we have with Region IX. We specifically put language in the appropriations bill to address this concern about Region IX last year and understand in the water quality area that Region IX is continuing to override State TMDL decisions, including now Arizona and California. What do you need to do to get the message across that Region IX cannot continue to override State authority in implementing environmental programs?

What are you doing to ensure that this is not happening in other Regions?

Answer: EPA water policy is set at Headquarters so that the same basic rules apply to everyone, yet provide needed flexibility for the regions and states to adapt to specific local circumstances. EPA Regions and Headquarters share a common goal of implementing Clean Water Act (and other statutory) requirements on a consistent basis, while ensuring that the NPDES-authorized States have the flexibility to implement the basic requirements in a manner tailored to each State's needs. EPA has an excellent record of working in partnership with our State co-regulators. Region IX has been working cooperatively with the States of California and Arizona to implement Clean Water Act programs consistent with the law and regulations. This is true for the other EPA Regional Offices as well. In carrying out its statutory oversight role, EPA Regions, on occasion, may disagree with a State over a particular TMDL or permit. The Regions work hard to resolve such differences with States in a cooperative manner and, in the case of TMDLs and water discharge permits, may decide that it is necessary to disapprove a TMDL or object to a proposed NPDES permit where the TMDL or the permit is inconsistent with statutory or regulatory requirements. Such instances are rare. With the new leadership on board in each of our Regional Offices, I expect that the Regional Offices will work out differences with State TMDL and permit decisions cooperatively. I have made it clear within EPA that only where State TMDL and permit decisions are inconsistent with the law and regulations and there is an environmental consequence at stake should EPA object to or disapprove State decisions.

The Region IX guidance issue has been resolved. The clear need to clarify norms for water quality-based permitting is what led Region IX to prepare, at the request of regulated permit holders, a draft guidance document on preparing NPDES permits. EPA Headquarters directed that the document, though circulated publicly, not be finalized. In June 2000 Headquarters directed the Regional Offices to make no new policy in this area until the issues were addressed and policy could be made at the national level.

Chairman Walsh

TMDL RULE: STATUS

Question: As you know, there was a tremendous amount of concern by Congress about how the TMDL rule was developed and whether States could implement it within the timeframes provided by EPA. The rule was subject to a court challenge, and NAS studies indicated that there are problems with the rule. You decided to review the rule. Can you update us on the status of this rule?

Answer: The TMDL rule published on July 13, 2000 is not currently in effect. On August 9, 2001, EPA proposed that the effective date for the July 13, 2000 rule be April 30, 2003. This rule became final on October 18, 2001. Meanwhile, EPA and the states are continuing to implement the TMDL program as required by a rule promulgated in 1985 and amended in 1992.

At the same time EPA has engaged in a process designed to reconsider certain elements of the July 2000 rule and to develop a new regulation. Between September and December 2001, EPA held five public TMDL listening sessions to provide a forum for receiving input on issues associated with the TMDL program including listing, scope and content of TMDLs, TMDL implementation particularly wit respect to nonpoint sources and EPA's role in the program. EPA has also engaged in consultation with the Department of Agriculture in an attempt to better harmonize our respective programs.

EPA is now in the process of drafting a new proposal which should be available for public comment in the summer, 2002. This proposal will attempt to address the concerns raised by the NAS study as well as the States while maintaining the momentum that the program has gained in the last few years to ensure that polluted waters are addressed in an expeditious manner.

Chairman Walsh

NON-POINT SOURCE: MISALLOCATION OF FEDERAL RESOURCES

Question: The 1998 National Water Quality Inventory data shows that urban and agricultural nonpoint source pollution is now the leading source of water quality impairment. The costs of addressing nonpoint source pollution are substantially less than the costs for point source treatment. Yet only 4% of the Clean Water SRF funds are being directed at nonpoint source projects. What is EPA doing to address this serious misallocation of federal resources?

Answer: The Clean Water State Revolving Fund (CWSRF) is essentially a state run program. EPA makes grants to states to set up state revolving fund programs. The states are given the authority by statute and regulation to use the funds for three purposes; section 212 point source projects, section 319 nonpoint source projects, and section 320 estuary projects.

Each state has the authority to determine funding priorities. EPA cannot instruct a state on how to allocate its CWSRF dollars. When the CWSRF program began, there was a requirement for all states to fund publicly owned treatment works identified as part of the National Municipal Policy list for the state. States were not allowed to fund any other eligible projects until those identified on the list were funded and in compliance or were scheduled to be in compliance.

This provision, however, no longer applies to any state. All states may now fund any eligible project, including nonpoint source projects. EPA uses national and regional meetings to promote the use of CWSRF funds for nonpoint source activities. EPA also promotes the use of an integrated planning and priority setting system to help states direct funds to address its highest priority water quality problems. Several EPA policies and guidance documents have been issued to clarify the significant flexibility EPA allows the states in making nonpoint source and estuary eligibility decisions. In addition, EPA has established Government Performance Results Act goals which support using the CWSRF to finance projects to address polluted runoff.

Through the life of the program, nonpoint source funding has increased dramatically. Through 2001, the CWSRF program has funded over $1.4 billion in nonpoint source projects, including approximately $216 million in 2001. Currently, 30 states are funding nonpoint source projects, and this number has increased every year and is expected to continue to increase. To date, 16 states have developed and implemented an integrated planning and priority setting system, and the number is expected to increase.

Chairman Walsh

NONPOINT SOURCE: GAP ANALYSIS

Question: When will EPA's "gap analysis" for the costs of dealing with nonpoint source pollution be released?

Answer: EPA is developing a Gap Analysis that will estimate the national funding needs for addressing nonpoint source (NPS) pollution problems; the currently available funding levels; and the gap between these two figures. This will act as a companion to other gap analyses that EPA is currently developing regarding funding gaps for wastewater and drinking water systems. The NPS Gap Analysis is currently being readied for senior-level EPA review and will then be forwarded to the Office of Management and Budget for further review.

Chairman Walsh

NONPOINT SOURCE: AVAILABILITY OF SRF & OTHER EPA FUNDS TO HOMEOWNERS AND FARMERS

Question: Most nonpoint source pollution is generated on private property. How is EPA assuring that SRF and other EPA funds will be made available to homeowners and farmers to construct privately-owned stormwater or wastewater projects on their land?

Answer: EPA's Nonpoint Source Program (NPS) under Section 319 of the Clean Water Act has historically provided a great deal of funding for private landowners, and especially for farmers. All Section 319 funds are awarded by EPA to State NPS agencies. States have historically passed through a significant percentage of Section 319 funds to farmers for local water-pollution prevention and remediation projects such as animal waste systems, nutrient management, soil erosion control, grazing management, and irrigation management. Similarly, States have used Section 319 funds to assist local communities to build and manage urban runoff controls and to assist homeowners to, for example, repair or replace malfunctioning septic tanks.

Similarly, the Clean Water State Revolving Funds (SRF) may be used by most States to provide assistance to farmers and homeowners. States have a variety of statutory structures for authorizing and implementing SRF loan funds, and in the earlier years relatively few States provided loans to address NPS pollution. In recent years the number of States using SRF loans to support NPS activity has grown; these States are now in the majority, and their number is growing. Some States use SRF loans to take actions to address homeowners' NPS pollution directly while other States use a variety of legal and financial mechanisms, such as intermediaries and linked deposit loans, to enable SRF loans to be made through municipalities and local banks. EPA uses national and regional meetings and workshops to promote the use of the SRF for such NPS pollution control purposes, and EPA's SRF program promotes the use of watershed-based priority-setting systems to help States direct their SRF funding to their highest water quality priorities.

Chairman Walsh

LACK OF COORDINATION AMONG WATER RESOURCE_RELATED AGENCIES

Question: States reported in the 1998 Water Quality Inventory a serious problem with the lack of coordination among water resource-related agencies. How is EPA addressing the need for integrated water resource management?

Answer: EPA is addressing the need for integrated water resource management by promoting and employing a watershed approach in much of what it does. The "watershed approach" addresses water resource issues that cross geographic, jurisdictional and political boundaries. It recognizes needs for water supply, water quality, flood control, navigation, hydropower generation, fisheries, biodiversity, habitat preservation and recreation - and it recognizes that these needs often compete. It establishes local priorities in the context of national goals, coordinates public and private actions, encourages partnerships to affect change, and enlists the support and knowledge base of the public at the local level.

In 2001, EPA sponsored the National Watershed Forum at which more than 400 leaders in watershed management from across the country discussed approaches and needs in this area. One of the major themes of the Forum was the need to improve coordination among agencies at all levels of government in terms of policies, programs, information and data, funding, technical assistance and other services needed at the community level to protect watershed resources. EPA and other key federal agency participants at the Forum have formed an interagency executive level committee to ensure progress is made in this area. For example, the committee is developing an integrated electronic "clearinghouse" to provide one-stop shopping to enhance the flow of information about watershed protection and restoration, technical assistance and funding, and other relevant data. This clearinghouse will combine information from all relevant sources into one database accessible by watershed managers at local, state, tribal and national levels.

The watershed approach also emphasizes the importance of planning and executing activities in a collaborative and coordinated fashion among all stakeholders, including water resource agencies. This is particularly important for water quality monitoring where the challenges of coordination and collaboration have both technical and management dimensions.

In the area of water quality monitoring, EPA participates in the Advisory Committee on Water Information (ACWI), a federal advisory committee of federal, state and non-governmental agencies dedicated to improving the utility and flow of water information. EPA has joined as a co-sponsor (with the US Geological Survey) a subgroup of ACWI, the National Water Quality Monitoring Council which has produced the following aids to water quality data comparability and sharing:

- A core set of water quality data elements [1] that define the recommended methods of documenting monitored data;
- A recommended laboratory accreditation program for federal laboratories;
- A National Environmental Methods Index that catalogs the performance and cost of field and analytic techniques; and,
- A series of national water quality monitoring conferences.

These products join others that cover standardized techniques for measuring stream flow, for using common geographic identifiers for streams and watersheds.

Recognizing the success of the National Water Quality Monitoring Council, EPA has pressed for the formation of state and regional water quality monitoring councils and counts as successful mechanisms for coordination councils in Texas, Oklahoma, Maryland, Virginia, Colorado, and Montana. Similar councils cover watersheds for Lake Michigan, the Chesapeake Bay and cover political units such as New England and Metropolitan Washington D.C. These local monitoring councils are effective mechanisms for applying the technical aids and published blueprints to collaboration in resource management.

[1] *Data Elements for Reporting Water Quality Results of Chemical and Microbiological Analytes*, approved by ACWI on May 15, 2001

Chairman Walsh

BUILDINGS AND FACILITIES: DETAILED INFORMATION ON SPENDING $17M INCREASE

Question: The budget request for Buildings and Facilities calls for an increase of over $17,000,000 compared to the 2002 enacted level. Please provide specific, detailed information on how, and on which facilities, you expect to spend these additional funds.

Answer: The increase in funding for fiscal year 2003 will provide resources for infrastructure upgrades related to counter-terrorism and to maintain the EPA-owned facilities at a level commensurate with industry benchmarks.

Counter-terrorism infrastructure spending

The Agency is currently conducting security vulnerability assessments of its facilities. Based on the findings, the Agency intends to begin physical security enhancement and mitigation efforts in May 2002 and continue these efforts into fiscal year 2003 and beyond. The requests for counter-terrorism- related infrastructure upgrades has led to $11.6 Million increase in the Buildings and Facilities base level funding for fiscal year 2003. These funds will focus on exterior components of our facilities, including doors and windows, exterior countermeasures, air intakes, utilities, ancillary equipment, and loading docks.

Repair and Upkeep

In recent years, the Agency has been shifting from leased facilities to government-owned facilities. In 1997, 37% of our facilities were government owned. By 2003, approximately 63% of our facilities will be government owned. While owning facilities increases economical efficiencies in many regards, it also requires increased spending for repair and upkeep that was typically provided by a lessor. In addition, in March of 2000 the Agency conducted a laboratory cost benchmarking study to determine whether our current repair and upkeep spending was sufficient to maintain our laboratories, as compared to other government agencies and private industry. The benchmark included Federal Agency (NIST, NOAA, DOE, EPA), Commercial (IBM, GE, BASF), University (University of Illinois, University of Connecticut), and Industry (IFMA, Whitestone) facilities. Based on the Study, it was determined that capital repair and upkeep should be equivalent to 2-5 percent of the replacement value of a facility. In 2001, the Agency's capital repair and upkeep budget was less than 0.3 percent of the replacement value of its facilities.

As a result, the Agency asked for an increase of $10 Million in the fiscal year 2003 budget to bring its Capital Repair and Improvement budget up to 1 percent of replacement value. The following are examples of the type of projects planned for 2003:

- Many laboratories have aged heating, ventilation and air conditioning systems (HVAC) and fume hoods that are near the end of their life span and are energy inefficient and must be replaced. This impacts the following laboratories: Edison, NJ; Chicago, IL; Narragansett, RI; Las Vegas, NV, and Cincinnati, OH

- Roof repair/replacement at several locations: Narragansett, RI; Edison, NJ, Ann Arbor, MI, Gulf Breeze, FL, and Cincinnati, OH

- Replacement of building equipment such as boilers, chillers, and generators necessary for laboratory operations: Duluth, MN; Narragansett, RI, Chicago, IL

B&F Appropriation - Change from FY 2002 (Dollars in Thousands)

Activity	FY 2002	Redirect/Increase	FY 2003 Request
New Headquarters Project	$6,960.0	-$3,900.0	$3,060.0
Energy Conservation	$1,800.0	-0-	$1,800.0
Repairs and Improvements	$16,567.5	$10,000.0	$26,567.5
Subtotal	**$25,327.5**	**$6,100.0**	**$31,427.5**
Homeland Security	-0-	$11,500.0	$11,500.0
Total	**$25,327.5**	**$17,600.0**	**$42,927.5**

Chairman Walsh

PESTICIDES REGISTRATION, REREGISTRATION AND TOLERANCE ASSESSMENTS: BUDGET REQUEST LEVELS

Question: The aggregate budget request for pesticide registration, re-registration, and tolerance assessments increases by a little over $500,000 compared to the 2002 funding level. However, registration and tolerance assessment dollars have declined significantly while re-registration dollars have increased significantly. Specifically why have you proposed the budgets for these programs in this manner?

Answer: The changes in the relative funding for two of these three programs - re-registration and tolerance assessments - are a result of the tolerance fee assumptions that are built into the President's Budget. The Maintenance fee provides funding for the re-registration program as well as some funds for the tolerance reassessment program. The 2003 President's Budget is built on the assumption that the new tolerance fee is finalized and collections will begin. The appropriated dollars shift to reflect the new fee structure. The tolerance reassessment program receives a higher proportion of fee funding, under the new tolerance fee rule, and so the appropriated funding for that goes down. Re-registration is fully funded by appropriated dollars, rather than partially. There is also a requested increase to support anti-microbial re-registration work to complete the tolerance reassessments for these chemicals and so that we continue meet the tolerance reassessment statutory deadline.

The change in the registration program reflects the elimination of the one-year 2002 Congressionally directed funds for the registration of safer pesticides, which increased the registration programs' budget by $1.5 M in 2002.

Chairman Walsh

PESTICIDES REGISTRATION, REREGISTRATION AND TOLERANCE ASSESSMENTS: REGISTRATION INCREASE VS. DECREASE

Question: If one assumes that new registrations are, by definition, "improved pesticides," shouldn't resources for the registration program be increased instead of decreased?

Answer: As mentioned above, the change in the registration program's funding is not a change to the base but rather reflects the elimination of the one-year 2002 Congressionally directed funds for the registration of safer pesticides, which increased the registration programs' budget by $1.5 M in 2002. The registration program remains a very high priority for the agency.

Chairman Walsh

PESTICIDES REGISTRATION, REREGISTRATION AND TOLERANCE ASSESSMENTS: IMPACT OF BUDGET REQUEST ON REDUCING BACKLOG

Question: What impact will the Agency's budget request for these three programs have on reducing the backlog of registrations, re-registrations, and tolerance assessments. Please be specific.

Answer: There currently is not a backlog of tolerance reassessments, reregistration eligibility decisions or product re-registrations. We have adjusted the schedule for re-registrations to coincide with the tolerance reassessment statutory schedule in order to avoid a duplication of effort and to streamline the process for the Agency and registrants. We are on schedule to meet the Food Quality Protection Act deadlines of 2006 for tolerance reassessments and the 2006 target for reregistration eligibility decisions as well as the 2008 target for product re-registrations. For registrations, the changes in funding reflect the elimination of the one-year 2002 Congressionally directed funds.

We do not anticipate any impact on the review and registration of applications for pesticide products. Note that an application for registration is considered a backlog if all the required data has been submitted, therefore the Agency has a complete, ready to process, application package. If an application has been submitted but the Agency has requested additional information which has not been submitted, the application is considered incomplete, but not a backlog. Our continued goal is to complete the scientific review and registration for reduced risk pesticide products within 18 months and other pesticide registrations within 3 years of application and data submission.

Chairman Walsh

PESTICIDES REGISTRATION, REREGISTRATION AND TOLERANCE ASSESSMENTS: PROGRESS OF NEGOTIATING NEW TOLERANCE FEE STRUCTURE

Question: What progress has been made in negotiating a new tolerance fee structure that is not retroactive in its enforcement and collections?

Answer: The President's Budget is the official Administration position on the tolerance fee rule and it is based on the 1999 proposed rule. As you know, this is the first year the agency has been allowed to proceed with any effort on the rulemaking, whether the current proposed rule or another tolerance rule, since 1999, although we are prohibited from finalizing the rule. The agency is reviewing the tolerance fee rule proposed in 1999, and also analyzing public comments and potential responses to comments. We are currently working to develop alternatives which can then become part of the policy discussion.

Chairman Walsh

SOURCE WATER PROTECTION PROGRAM

Question: What are the Agency's specific plans in fiscal years 2002 and 2003 for implementation of the Source Water program?

Answer: There are two main aspects to the Agency's Source Water Protection program: 1) source water protection, which is designed to prevent contamination of water supplies through the delineation, assessment and protection of source water areas, and 2) underground injection control (UIC), which is designed to ensure the proper disposal of hazardous and nonhazardous wastes through underground injection.

With respect to source water protection, in FY 2002 and 2003 EPA's primary objective is to implement the source water-related provisions of the 1996 Amendments to the Safe Drinking Water Act (SDWA), which require the States to ensure that all 165,000 public water systems conduct an assessment of the quality of their drinking water sources. These assessments will include: 1) the delineation of the physical area surrounding ground water and surface water sources of drinking water; 2) identification of actual or potential sources of contamination in the source water area; and 3) the determination of the susceptibility of drinking water supplies to contamination by identified sources of contaminants EPA will continue to provide technical assistance, training and guidance to the States as they strive to meet the statutory deadline of May 2003 for completion of all source water assessments.

To protect water supplies from contamination through underground injection of hazardous and nonhazardous wastes, in FY 2002 and 2003 EPA will continue to provide technical assistance to states to ensure the proper disposal of approximately 9 billion gallons of hazardous waste each year, and over 2 billion gallons of brine per day from oil and gas operations. In addition to assisting States in the regulation of wastes disposed into motor vehicle waste disposal wells and banning large capacity cesspools, in May, 2002, the Agency will make a final determination whether to regulate the other categories of Class V (shallow) wells. To help further protect source water from contamination by injection into shallow wells, in FY 2003 the Agency will implement a management plan that includes guidance, outreach, training and technical assistance to States.

Chairman Walsh

RELATIONSHIP BETWEEN SOURCE WATER PROTECTION PROGRAM AND HOMELAND SECURITY

Question: What is the relationship between the source water program and the Agency's plans to assess and support protection for community water systems?

Answer: The source water program and the Agency's efforts to improve water security are conceptually very similar. Since Congress passed the 1996 Safe Drinking Water Act (SDWA) Amendments, EPA has been working with states and communities to delineate and assess source water areas and then to protect water supplies from actual or potential sources of contamination, including agricultural, industrial or other human activities. The Source Water Protection program complements the Agency's program to ensure water security, which will provide direct assistance to water and wastewater systems to conduct vulnerability assessments and enhance emergency response plans, and training on the use of other security-related detection, monitoring and treatment tools.

Chairman Walsh

SMALL SYSTEM TECHNICAL ASSISTANCE

Question: Is EPA best suited to provide technical assistance on community water protection to small systems throughout the nation or is this work better left to other groups or associations who have a history of providing such assistance?

Answer: The Agency, in partnership with a variety of organizations, such as the Association of State Drinking Water Administrators (ASDWA) and American Water Works Association (AWWA), works toward our shared goal of ensuring that small water systems have the capacity to provide safe drinking water. EPA also regularly provides technical assistance and centralized training through the Drinking Water Academy, and in conferences and workshops, to help small water systems nationwide comply with drinking water standards. Other organizations, such as the Rural Community Assistance Program (RCAP) and National Rural Water Association (NRWA), are funded by EPA. RCAP and NRWA complement EPA's efforts by providing "on site" technical assistance and training to small systems.

Chairman Walsh

RESOURCES FOR WATER TRADE ASSOCIATIONS

Question: How much is requested in your budget submission to provide support or assistance to such groups or associations?

Answer: The Agency does not request funds for individual organizations through the President's Budget. In formulating its budget requests to the Congress, the Agency estimates what support can be provided to small water systems to maximize their technical, financial, and managerial capacity to provide safe drinking water. As the Agency implements its budget, it allocates a portion of its appropriated funds for training and technical assistance to small systems in order to best achieve public health goals.

Chairman Walsh

ADDITIONAL QUESTIONS FOR THE RECORD

Question: Within the Superfund program, the Agency's budget justification speaks to enhanced PRP involvement and reforms of this program. Please provide a more detailed explanation of what your plans are in this regard and indicate what the expected impact will be on the program.

Include in your response such details as expected improvements in revenue collections, timing of clean-up activities, reduced litigation, and the like.

Answer: In recent years, the Superfund enforcement program has successfully encouraged or compelled potentially responsible parties (PRPs) to undertake or fund approximately 70% of new remedial construction work at the nation's worst hazardous waste sites. Though no new investments are requested for this program for FY 2003, the Agency's goal is to achieve the same high level of private party involvement in site clean-up.

The Agency implemented revised indirect cost rates that fully accounted for the program's costs at Superfund sites. These revised rates increased the overall amounts recoverable to the federal government and are expected to increase total collections over the long term.

In tandem with the Agency's "Enforcement First" policy (i.e., getting responsible parties to clean-up sites as a first course of action rather than undertaking a federal clean-up and suing to recover expenses), the Agency has implemented a number of reforms to expedite site clean-ups, increase fairness, reduce transaction costs and promote economic redevelopment. For example, more than 475 de minimis settlements have been reached protecting over 24,700 small volume waste contributors from potential third party litigation. A comprehensive list of these Superfund reforms and their successes, can be found at: http://www.epa.gov/oerrpage/superfund/programs/reforms/.

Chairman Walsh

SCIENCE & TECHNOLOGY: SUPPORT FOR PROPOSED INCREASE IN INNOVATIVE APPROACHES

Question: Under Science and Technology, the Agency has indicated support "for a proposed increase in innovative approaches." Please provide specific and detailed information regarding this plan, including what your proposed goals may be, costs or savings generated by the plan, how widespread in your research programs you expect to use the approach, and other pertinent information.

Answer: Over the last decade, EPA has gradually shifted its emphasis to preventive techniques to address environmental problems. A preventive approach requires, among other things, innovative design and production methods that minimize or eliminate environmental liabilities. The Agency now routinely encourages the use of novel approaches throughout its research and development program. While EPA has not attempted to quantify the long-term cost savings that will result from these efforts, we anticipate the development of new methods and technological advances will lead to significant savings when compared to current practices.

In FY 2003, EPA will seek to address the nation's most complex environmental problems through innovative concepts that include the National Environmental Technology Competition (NETC), as well as state-of-the science research in areas such as computational toxicology, and biotechnology. Through NETC, EPA and its stakeholders will identify high priority environmental problems that can benefit from targeted, cost-effective technological solutions. The primary goal of NETC is to produce more effective and lower cost solutions by stimulating private sector technology development in areas where gaps currently exist.

Computational toxicology research will expand EPA's ability to assess and predict the human health and ecological risks from environmental exposures through the development and enhancement of highly sophisticated, computer-based models and scientific advances in molecular biology and bioinformatics. In addition, this research ultimately will reduce the Agency's reliance on animal testing protocols.

Biotechnology presents a wealth of innovative opportunities to use genetically engineered crops to improve productivity, provide resistance to pests and other stresses, and increase nutritional value. Research in this area will address three key concerns: 1) potential allergenicity of proteins introduced into the food supply by engineered crops; 2) potential adverse ecological effects on non-target species; and 3) potential development of pest resistance to the genetically modified crops. The goal of this research is to develop scientific and policy-relevant information needed to assess and manage potential risks.

Questions Submitted for the Record by Congressman Mollohan

SUPERFUND: EXPENDITURES FOR SUPERFUND CLEANUP ACTIVITIES

Question: Can you tell the Committee how much you are expending under the Superfund for clean-up activities, excluding brownfields and homeland security, in 2002?

Answer: EPA's FY 2002 budget for the Superfund response program, excluding brownfields and homeland security, is $825 million. We will not know what our expenditures for 2002 are until after the end of the fiscal year.

Congressman Mollohan

SUPERFUND: EXPENDITURES FOR SUPERFUND CLEANUP ACTIVITIES

Question: How much you are proposing for 2003?

Answer: For FY 2003, the President has requested $840 million for the Superfund response program, excluding brownfields and homeland security. We will not know what our expenditures for 2003 are until after the end of the fiscal year.

Congressman Mollohan

SUPERFUND: CHANGES MADE IN PROGRAM MANAGEMENT

Question: You have been quoted as saying that the reason the number of clean-up completions has been cut in half under your Administration is that the program is now shifting to more complex and costly sites. It is hard to understand how this could have happened suddenly at the beginning of 2001. Can you tell us what changes were made in the program management to cause this significant drop in the number of sites completed?

Answer: The Superfund process, from site listing to cleanup construction on average has taken roughly 8 to 10 years. Decisions made 5 years before a site ever reaches the construction phase will have an impact on when that site reaches construction completion many years later. The reduction in construction completions has resulted from a variety of factors including, decisions made years ago on funding priorities, the size and number of construction projects at remaining non-construction completion sites on the National Priorities List (NPL), and the need to balance competing environmental priorities within the Superfund program. In prior years, EPA focused resources on Superfund sites that were further along in the cleanup process, thus creating a backlog of sites with significant years of construction work remaining.

Although the number of Superfund sites completing construction in a given year is being affected by program decisions made years before, we are looking for new ways to improve program performance. The Agency has initiated a comprehensive review of all planned or existing Superfund construction projects. We intend to manage the Superfund program in a manner to create an optimal balance between the achievement of risk reduction, construction progress, and beneficial reuse.

Congressman Mollohan

SUPERFUND: STATUS OF NPL SITES

Question: What is the total number of Superfund sites currently on the so-called National Priority List (NPL), the number where clean-up has been completed, and of the remaining sites how many are actively being worked on?

Answer: There are currently (as of April 9, 2002)1479 final and deleted sites on the National Priorities List (NPL). Of these sites, 810 have achieved construction completion, 390 have remedial construction underway, and 255 have study or design underway, of which 156 have had removal activity. Eighteen sites have study or design pending, 8 of which have had removal activity, and 6 sites have been deleted and referred to other authorities. Of the 1479 sites, 1370 (93%) have had construction activity, are completed, or are deleted from the NPL.

Congressman Mollohan

SUPERFUND: SUPERFUND TRUST FUND

Question: Are we correct that the Superfund Trust Fund will essentially be exhausted at the end of 2003 and that general revenue will pay 100 percent of the cost in future years under your budget proposal?

Answer: The Agency will provide this information directly to the Committee prior to publication of the hearing volume.

Congressman Mollohan

SUPERFUND TRUST FUND: HISTORY OF SUPERFUND TRUST FUND

Question: Please insert in the record at this point a history of trust fund balances since enactment and as far into the future as your models now indicate there will be a balance.

Answer:

--Amount of trust fund, each year, 1981 to present

Fiscal Year	End of Year Unobligated Balance
FY 1981	$70.2
FY 1982	$187.6
FY 1983	$295.8
FY 1984	$203.4
FY 1985	-$0.1
FY 1986	$8.9
FY 1987	$113.9
FY 1988	$239.8
FY 1989	$340.2
FY 1990	$311.2
FY 1991	$1,212.2
FY 1992	$1,402.4
FY 1993	$2,097.2
FY 1994	$2,673.6
FY1995	$3,614.3
FY 1996	$3,789.4
FY 1997	$2,635.8
FY 1998	$2,115.3

FY 1999	$1,539.8
FY 2000	$1,262
FY 2001	$860.0
FY 2002	$427*
FY 2003	$28*

* FY 2002 and FY 2003 are estimates based on prior year rates of interest, collections, and recoveries.

Congressman Mollohan

HOMELAND SECURITY: STATUS

Question: Could you review for the Committee the current status of your homeland security efforts for this year? Are you basically on-track with these efforts?

Answer: As part of the FY 2002 Emergency Supplemental Appropriation, EPA received $175.6 million to conduct several activities, primarily: emergency response, criminal investigations, water supply protection, research, and facilities security.

Emergency Response and Preparedness

EPA's Office of Solid Waste and Emergency Response (OSWER) received $39 million in the FY2002 Supplemental Budget. Of this amount, $12.5 million was allocated for partial reimbursement of the Capitol Hill clean-up. The remaining $26.5 million is being used to improve the ability of the response and preparedness programs to manage the consequences of a terrorist act.

Although EPA has been effective in responding to the World Trade Center and Pentagon incidents, and the anthrax sites across the country, we learned that the scope of our mission was greater than we had anticipated, requiring us to draw on resources from all of our regional response centers. Accordingly, the Agency is increasing its response capacity and in our Environmental Response Team, and improving technical capabilities.

EPA's regional response and preparedness programs will strengthen the capabilities and increase the capacity of our emergency response contracts and procurement of new-generation equipment for chemical, biological and radiological monitoring.

The Environmental Response Team (ERT), which currently is based primarily in Edison NJ, has been allocated $5.5 million to establish a western branch, proposed for Las Vegas, NV, to provide more complete and timely service to the western half of the country; an additional 20 technical and logistical experts will staff expanded ERT operations.

The Agency is also improving our national Emergency Operations Center by upgrading equipment to cover increased Agency responsibilities to coordinate at the national level with the FBI, FEMA and the Office of Homeland Security.

EPA is on track to have these program enhancements fully implemented by the end of FY 2002.

Research

In FY 2002, funds were redirected to do research in a number of areas including: a series of studies to assess the relative toxicity of dust samples collected in the vicinity of the World Trade Center (WTC); research on determining the health effects of mixtures of chemicals compounds and contaminants in the WTC environment; and a collaborative effort with the Office of Water (OW) and other organizations on Water Supply Security. EPA also received FY 2002 Emergency Supplemental resources that are being used to, a) evaluate the performance of drinking water treatment systems for their ability to cost-effectively remove inactive biological and chemical agents, and b) provide quality-assured and peer-reviewed data to assist first responders and others in selecting effective technologies to destroy chemical and biological contaminants on surfaces and in buildings. Funds will also be used to prepare for the implementation of the proposed Homeland Security research in FY 2003. All of research efforts are on track and will continue through FY 2002.

Criminal Investigations

Within EPA, the Office of Criminal Enforcement, Forensics and Training (OCEFT) has lead responsibility for coordinating PDD-39 crisis management (i.e. law enforcement) activities. In this capacity, staff from OCEFT's Criminal Investigations Division (CID) has initiated over 170 Homeland Security related investigations including domestic activities. Special Agents are providing environmental crimes expertise to the FBI and DOJ terrorism task forces, and we are developing a National Counter Terrorism Evidence Response Team to coordinate with FBI Headquarters and field offices. In addition, staff from CID and technical personnel from OCEFT's National Enforcement Investigations Center (NEIC) have provided on-site support when environmental-specific criminal investigative and crime scene support is requested at designated National Security Special Events such as the 2002 Winter Olympic Games in Salt Lake City and the Super Bowl XXXVI in New Orleans. The program is building capacity to respond to a wide range of threats through specialized training, hiring of experts, and integrating efforts with the FBI and other agencies, as appropriate, and we are on schedule implementing these activities

Water Supply Protection

To protect critical water infrastructure, Congress provided $88.8 million to EPA in the FY 2002 supplemental appropriations bill. EPA is currently on schedule assessing the security needs and vulnerabilities of the Nation's drinking water and wastewater systems.

The Agency used $2.5 million in FY 2002 base funds to accelerate the use of vulnerability assessment tools and training for drinking water and wastewater utilities. As a result, utilities across the nation are better prepared to conduct vulnerability assessments with federal assistance funds.

On March 28th, 2002, the Agency published a Request for Applications announcing the availability of grants for the approximately 400 largest publicly owned community drinking water systems, which each serve at least 100,000 persons on a regular basis. These largest drinking water systems serve approximately 50 percent of the total U.S. population. We expect to award

approximately 400 grants of up to $115,000 to these drinking water systems over the next few months. EPA is scheduled to fund the majority of these grants in July 2002.

By the end of FY 2002, EPA intends to: 1) award $5 million to States and Territories to support counter-terrorism coordination work in conjunction with EPA and drinking water utilities to implement homeland security activities, and 2) provide $4 million to support wastewater utilities activities, including development and testing of counter terrorism tools and training for vulnerability assessments, undertaking vulnerability assessments and emergency operations plans, and collecting data on appropriate remediation efforts.

In the last quarter of FY 2002, EPA plans to begin distributing approximately $23 million of the supplemental funds to support technical assistance and training on vulnerability assessments for small and medium drinking water systems, and also to develop emergency response plans or strengthen existing plans. EPA is working jointly with States and utility organizations in determining a specific allocation plan. Also in the last quarter of FY 2002 , EPA will provide about $5.8 million to support activities for additional training on vulnerability assessments and other counter terrorism tools, and to investigate security-related detection, monitoring, and treatment tools.

Facilities Security

EPA's nationwide facility inventory includes 146 facilities in 38 states, including laboratories, administrative offices, field and satellite offices, and warehouses. These facilities are critical to the Agency's overall mission of protecting and safeguarding America's environmental resources. To minimize or eliminate future terrorist attacks on our facilities, EPA is conducting nationwide facility physical security vulnerability assessments to identify and document vulnerabilities, assess the local and regional threat, confirm critical assets, and determine the overall risks.

EPA has completed site visits at 50 of its 146 facilities, including Headquarters, Regional Offices and Laboratories, mega laboratories, and critical infrastructures. EPA has also completed 20 of the 50 reports of findings for these facilities. Assessments are expected to continue throughout the remainder of FY 2002 and into FY 2003. The ranking and prioritization of the Agency's most vulnerable facilities, critical infrastructures, and likely targeted facilities is expected to be completed in May 2002. At that time, EPA will make funding decisions and commence physical security countermeasures and mitigation efforts of those facilities.
Congressman Mollohan

Congressman Mollohan

HOMELAND SECURITY: DRINKING WATER SYSTEMS

Question: We received some initial estimates of your plans for assessing water system vulnerability two weeks ago. This concentrates on the largest water systems with direct grants to do assessments. How vulnerable are these systems and how effective can we be in protecting them from terrorist attack?

Answer: Although we do not have complete information on the vulnerability of these systems, we are concerned that some may present opportunities for terrorist acts. The purpose of the vulnerability assessments is to identify the nature and extent of these weaknesses and to serve as the basis for an emergency response plan so that the systems may address the highest priority risks as they see fit. Due to the diversity of system types (ground water, surface water, treatment process variations), vulnerabilities may vary considerably from system to system.

We can significantly improve protection from terrorist attacks for drinking water utilities. Toward that end, in Fiscal Years 2001 and 2002, funds were provided to develop materials and training tools for drinking water systems to conduct vulnerability assessments and to establish a secure Information Sharing and Analysis Center (ISAC), which allows drinking water utilities to share threat information with the FBI and utilities. Activities in FY 2002 include continuing to develop the ISAC, testing and modifying the vulnerability assessment tool; developing and disseminating guidance for remediation; and training water system operators in the application of vulnerability assessment and remedial plans. Drinking water systems have strong incentives to protect water supplies, and are likely to be able to alter day-to-day operations procedures as a first step towards increasing security. EPA is also providing assistance to systems to facilitate their use of the State Revolving Fund to pay for the capital improvements to reduce vulnerabilities identified in their assessments.

By focusing first on the largest drinking water systems, the Agency is effectively working towards its goal of "making the most systems safest soonest."

Congressman Mollohan

HOMELAND SECURITY: SMALL COMMUNITIES

Question: Are you satisfied that we are paying enough attention to small community water systems?

Answer: We are working closely with States, Tribes, and utility organizations to determine the best ways to meet small and medium drinking water system needs. These systems face special challenges due to their limited staff and financial resources. EPA will use approximately $23 million of Fiscal Year 2002 appropriations to provide training, development, and distribution of tools, and "hands-on" technical assistance to the small and medium systems. In the FY 2003 President's Budget, the Agency requests $16.9 million specifically to support small and medium drinking water systems' efforts to conduct vulnerability assessments.

Congressman Mollohan

HOMELAND SECURITY: CLEAN UP THE HART AND LONGWORTH BUILDINGS

Question: Last Fall Congress provided $12.5 million to clean-up the Hart and Longworth Buildings. We understand the cost so far is in excess of $23 million. Can you tell us what your current cost estimate is for your Congressional work?

Answer: Some monitoring work, as well at the decontamination of office artifacts is still ongoing, but we have completed all of the major tasks required of us by the Capitol Hill Police Board, and, although the final financial records of the project are not yet available, we believe we will see final costs in the range of $27 million.

Congressman Mollohan

HOMELAND SECURITY: HART CLEANUP FUNDING

Question: $23 million and counting for the Hart clean-up is a lot of money. Are you satisfied that all these costs were necessary?

Answer: In October 2001, we initiated a project that had no precedent in the previous experience of the government-wide response community, and that we were working under enormous public concern and scrutiny and the mandate from the Capitol Hill Police Board to expedite the cleanup to the maximum degree, maintaining 24/7 operations from October through January. In the course of the response, we have learned a tremendous amount of practical knowledge regarding the decontamination of structures, and certainly, if we were to conduct the response starting today, we hope we would be able to benefit from this knowledge and possibly reduce the costs. We firmly believe, however, that the costs we did incur were absolutely unavoidable and necessary to conduct the response under the terms of our mission.

Congressman Mollohan

HOMELAND SECURITY: 2003 FUNDING

Question: The 2003 budget includes $75 million to study improved and hopefully cheaper technologies for handling clean-up of biological contamination in buildings. We are all for this effort as a general principal but this seems a very large amount of money. How was this estimate arrived at?

Answer: The $75 million requested includes studies for technologies to clean-up biological contamination, however it also includes research on detection of contaminants, containment of contaminants, decontamination of indoor materials, disposal of contaminated supplies and equipment, and technology transfer. This estimate was derived from the government-wide initiative for Homeland Security.

Congressman Mollohan

WATER AND WASTEWATER INFRASTRUCTURE NEEDS

Question: Governor Whitman, there have been a number of comprehensive studies of water and sewer infrastructure needs done in recent years including a large study by the Corps of Engineers. Can you tell us your current estimates of the backlog in infrastructure improvement projects for this country's clean water and waste water treatment facilities?

Answer: EPA estimates in its latest Needs Surveys that we will need to invest over $300 billion in clean water and drinking water infrastructure. In a 2001 report, the Water Infrastructure Network (WIN) identified an infrastructure investment need of $740 billion for clean water and drinking water over the next 20 years. Over the past year, several stakeholder groups including the WIN, the Association of Metropolitan Sewerage Agencies, and the American Water Works Association issued reports estimating water infrastructure needs. These estimates were all substantially above those of EPA's Needs Surveys. Generally, these cost estimates differ from EPA's because the methodologies and definitions for developing them differ. For example, EPA Needs Surveys include only projects that are eligible for SRF funding under the Clean Water Act and Safe Drinking Water Act. Also, EPA requires that costs included in the Needs Surveys be established by planning or design documentation.

The agency has also transmitted to OMB for review a draft Gap Analysis Report that estimates the gap between projected need and current spending in water and wastewater investments over the next 20 years. The EPA undertook such a report to quantify the costs associated with needs that were not identified in the survey process. The report was evaluated by a diverse panel of 8 external industry experts. Overall, the reviewers commended the report as a reasonable effort to quantify the gap, particularly given the limitations of the available data. Irrespective of which estimates are cited, the wastewater and drinking water industries clearly face a significant funding challenge in meeting a very large investment need. The industry will need to use some combination of spending and innovative management practices (e.g. asset management) to meet projected needs.

Congressman Mollohan

CLEAN WATER SRF REDUCTION

Question: Your budget proposes to cut funding for the clean water state revolving fund by $138 million, from $1,350 million to $1,212 million. This doesn't seem to make any sense given the needs and the public support for the program. Is there any programmatic justification for the cut or is it just to meet budget totals.

Answer: The Clean Water State Revolving Fund are a key component of assistance to States for base programs. Combined with the Drinking Water State Revolving Fund, the FY 2003 President's Budget Request recognizes the importance of these State Revolving Funds by proposing the largest Presidential request ever. At the President's requested funding level of $1.212 billion, the CWSRF will meet its longstanding goal of an average annual revolving level of $2 billion.

Congressman Mollohan

ENVIRONMENTAL EDUCATION

Question: Can you explain your current proposal to transfer the Environmental Education program, which received $9.2 million from EPA last year to the National Science Foundation (NSF)?

Answer: The FY 2003 President's Budget proposes to transfer the funding ($9.2million) and the functions of EPA's Office of Environmental Education to the National Science Foundation. Consolidating this program along with NSF's math and science programs will better serve educators and students. NSF is noted for its expertise and success in funding competitive programs in math and science.

Congressman Mollohan

ENVIRONMENTAL EDUCATION

Question: Can you tell us whether this proposed transfer is based on evaluation which suggests that the program at EPA is ineffective or poorly managed?

Answer: The President's proposal to transfer the Environmental Education Program to the National Science Foundation is based on an assessment in the President's budget that the program is ineffective. The function of Environmental Education is better served by one agency, and the National Science Foundations is fully capable of administering this function.

Congressman Mollohan

ENVIRONMENTAL EDUCATION

Question: If the program were to be transferred, can you tell us how much the program might be modified and what type of transition would there be for the existing program?

Answer: If the OEE program were to be transferred, the entire division budget and all of its functions would be transferred to the National Science Foundation.
A transition strategy has not yet been developed.

Congressman Mollohan

BUDGET DOCUMENTATION FOR THE RECORD

Question: Governor Whitman, your formal budget submission to the Committee, which is organized around goals rather than programs, does not include much of the information which Members need to write the appropriations for the EPA when we get to mark-up. EPA is the only agency under this Subcommittee which does not submit traditional budget justifications. Can you tell us if there are any other agencies of the federal government who follow the EPA budget format?

Please provide the following to be submitted to the Committee and my office:

- A composite table for EPA as a whole broken down by appropriation account showing all key programs under each account with prior year funding, budget year proposed funding and the change proposed.
- Annotated bill language for each account showing by footnote the reason for any change proposed from last year's appropriation law.
- Legislative citations for each account for each activity within the account. This should include the date the authorization expires or expired.
- For each account a short description of the programs goals and the program structure for accomplishing those goals.
- For each account a summary of changes table by key program with an explanation of the policy behind each change.
- For each activity(key program) within the account:
    - A header showing the amount in 2002, proposed for 2003 and the change; the authorization for the program.
    - A cross reference to amounts in other accounts which finance the same activity.
    - A description of the activity being funded with the budget mechanism described (formula grant, competitions, etc.)
    - A description of accomplishments in the past year and expected during the current year.
    - A description of the program changes proposed in the budget for next year with numeric data on changes in numbers of awards, size of awards, type of awards, etc.
    - For each account an FTE employment table for positions funded through that appropriation account. This should show positions as well with average grade and salary.

Answer: Consistent with Mr. Mollohan's request, the Environmental Protection will provide the above documentation to the House Appropriations Committee and his office.

Questions Submitted for the Record by Congressman DeLay

PROPRIETARY COMPUTER MODEL:
ANALYSIS OF THE "CLEAR SKIES" PROPOSAL

Question: Has EPA used a proprietary computer model to conduct its analysis of the "Clear Skies" multi-pollutant proposal?

Answer: EPA analyzed the potential impact of the President's Clear Skies Initiative using the Integrated Planning Model (IPM). ICF Consulting holds the copyright to IPM and performs analysis using the model under contract to EPA. ICF Consulting also performs analysis for private companies and several utilities that include the use of IPM. EPA also uses other models to project the benefits of Clear Skies. These models are publicly available.

Congressman DeLay

PROPRIETARY COMPUTER MODEL: CONTRACT

Question: If so, please describe the nature of the contract under which this model is available to EPA. How long has this contract been in place? How much has EPA paid this contractor for use of the model and other services since 1997?

Answer: EPA has a general service contract with ICF Consulting under which, pursuant to EPA's direction, they provide economic and technical analysis to support EPA's work to develop, implement, and assess the effectiveness of pollution control programs. As part of these analyses, ICF Consulting uses IPM to estimate the potential economic impacts of policy options on the energy sector as well as the potential affect of policy options on key power plant emissions. The deliverables are the analysis and the results of the IPM runs.

The contract was awarded to ICF Consulting on October 1, of 1997. To date, EPA has paid $5.9 million to ICF Consulting for general economic and technical analysis.

Congressman DeLay

PROPRIETARY COMPUTER MODEL:
MODEL USED FOR OTHER POLICY ANALYSIS

Question: Has EPA used this model for other policy analysis? If so, what other air quality proposals and regulations have relied on the output from this model?

Answer: EPA used IPM to evaluate various policy options in the development of rules for the 1997 National Ambient Air Quality Standard (NAAQS) for ozone and particulate matter, the Ozone Transport Assessment Group, the 1998 call for Nitrogen Oxide State Implementation Plans (NOx SIP call), and the 1999 section 126 regional ozone control program.

Congressman DeLay

PROPRIETARY COMPUTER MODEL:
VIOLATION OF THE DATA QUALITY LAW

Question: Does EPA recognize that use of a proprietary model for major policy analysis is in violation of the Data Quality law?

Answer: The modeling assumptions, variable inputs, calculation methodologies, and outputs of IPM are extensively documented in the publicly available "Introduction to EPA Modeling (V.2.1) Using the Integrated Planning Model."(Please see http://www.epa.gov/airmarkets/epa-ipm/index.html) In addition to a detailed description of the model, the public may gain access to IPM for its own analysis. In fact, IPM has been used by both industry and non-governmental organizations to conduct independent analyses of multi-pollutant programs and the Clear Skies proposal.

IPM is a standard industry analytical tool that has been used by the power-sector in strategic business planning for a decade. EPA's ability to use such tools has improved the quality and strengthened the credibility of our analyses. EPA believes that it is appropriate and beneficial to use standard industry analytical tools regardless of whether they are proprietary, providing that there is thorough documentation of the tools and explanation of individual analyses.

Given the public availability of the IPM model, as well as the availability of the assumptions, inputs, methodologies, and outputs of the model as used in EPA analyses, EPA believes its dissemination of information is consistent with principles adopted in Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2002 (Pub. L. 106-554), and with the OMB guidance issued in response to that law. Section 515 requires OMB and federal agencies to issue guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies. OMB issued its final guidelines on September 28, 2001 (66 Fed. Reg. 49718). OMB's guidelines direct agencies to issue their own implementing guidelines by October 1, 2002. Currently, EPA is in the process of drafting its guidelines and planning for public review and comment of the draft guidelines. We anticipate the comment period will begin in early May 2002.

Congressman DeLay

PROPRIETARY COMPUTER MODEL:
RE-ANALYSIS OF ITS "CLEAR SKIES" PROPOSAL

Question: Is EPA prepared to conduct a re-analysis of its "Clear Skies" proposal using a publicly available model, i.e., the EIA model? When would this analysis be available?

Answer: Because EIA has already used the National Energy Modeling System (NEMS) model to analyze the potential affects of the Clear Skies proposal, it would be redundant for EPA to conduct additional modeling using NEMS.

Congressman DeLay

HOUSTON SIP: UPDATE ON EPA SUPPORT AND COORDINATION

Question: Please give me an update on EPA support and coordination of the science and modeling required to ensure the court decision is not overturned regarding the Houston SIP.

Answer: EPA has worked closely with Texas Natural Resources and Conservation Commission (TNRCC) and industry groups to investigate improvements to the ability of air quality model to deal with the particular meteorology and concentration of industry that are unique to Houston.

Industry organizations have challenged the State's air quality modeling, which EPA approved. Their challenge is based on their belief that the model does not perform well enough to support the emission reductions that have been adopted. As part of a settlement staying the industry litigation, the State, in conjunction with industry and academia, has embarked on an accelerated review of the science. EPA's Regional Office, Office of Research and Development and Office of Air and Radiation (OAR) have been active participants in this review. The consent agreement requires Texas to consider whether the State Implementation Plan (SIP) can be revised to reduce the level of industrial nitrogen oxides (NOx) control and increase the level of reactive volatile organic compounds (VOC) control.

In preparation for anticipated SIP revisions in May 2004, Texas organized the Texas Air Quality Study 2000 to intensively study the causes of ozone formation in Houston. Because of the industry litigation over modeling, Texas has accelerated its review of the findings from the study. The results indicate that industrial emissions in Houston are highly reactive and lead to very efficient formation of ozone, at rates not seen in other areas of the country.

The commission on February 28 heard a staff report indicating that the science will likely support such a SIP revision to reduce industrial NOx control and increase controls on reactive VOC. The State has until June 1 to decide whether to propose a revision of the SIP. EPA, both Region 6 and OAR, have been working closely with Texas and industry representatives in the evaluation of the causes and potential solutions to the ozone problem in Houston. We are hopeful that through this new information a more effective control strategy can be identified. EPA will continue to work with Texas, and the scientific community to help insure that the plan continues to be supported by the best science available.

Questions Submitted for the Record by Congressman Hobson

TREMONT CITY LANDFILL SCHEDULING AND COST MANAGEMENT

Question: I am pleased that Region 5 is making progress in evaluating the Tremont City Landfill site in my district. In a public briefing held a few months ago, your regional staff informed my constituents that all US EPA investigation activities are complete and the draft report is being prepared. On the enforcement side, I understand that EPA has identified the potentially responsible parties who've dumped in the barrel fill, and you are working with them to begin the process of a remediation facility study. I must admit that this process is taking quite a while - we're going on three years now. What is EPA doing to reduce the time and cost associated with site characterization and site remediation activities?

Answer: EPA expects the potentially responsible parties (PRPs) to perform and fund the Remedial Investigation/Feasibility Study (RI/FS) phase and subsequent phases of the project. EPA expects its future expenditures to consist primarily of oversight costs which will be reimbursed to EPA by the PRPs according to the terms of the anticipated Administrative Order on Consent. EPA oversight costs are typically small when compared to PRP remediation costs.

EPA will continue to give the Tremont City Landfill Site a high priority in order to achieve an expeditious cleanup.

Congressman Hobson

TREMONT CITY LANDFILL FUNDS PROPOSED IN FY 2003

Question: How much money are you proposing in FY03 to get to those goals?

Answer: In recent years, EPA has incurred approximately $100,000 in oversight costs per year during the Remedial Investigation/Feasibility Study (RI/FS) phase of a project. Our FY 2003 costs should be similar to previous years. EPA expects to be reimbursed by the Potentially Responsible Parties (PRPs) for these costs as described in the previous response.

Congressman Hobson

BROWNFIELDS: SUBURBAN AND RURAL COMMUNITIES

Question: Of the approximately 20-30 communities who will be eligible to apply for the new brownfields program, how many do you anticipate to be from sub-urban communities?

Answer: All eligible applicants are identified in the new Section 104(k) of "The Small Business Liability Relief and Brownfields Revitalization Act." Entities eligible to apply for grants under this new authority include local governments (including quasi-governmental entities such as regional councils and redevelopment agencies), States, Tribes and non-profit organizations. The eligible entities under this new authority is broader than EPA's current program and will enable the Agency to assist many more than 20 to 30 communities.

With regard to sub-urban communities, EPA's past experience with assessment pilots has resulted in awards of between 40-45 percent (176 of 399 pilots awarded) to communities with populations less than 100,000. The Agency grant application guidelines will be published in the Fall of 2002. New funding is requested to be available for FY2003. In addition, the Agency will use the ranking criteria which included a specific requirement that grants assure the fair distribution of funding between urban and "nonurban" areas to ensure a fair and nationally competitive process for the determination of grant awards.

Congressman Hobson

BROWNFIELDS: APPLICATIONS FROM RURAL COMMUNITIES

Question: How about rural communities?

Answer: All eligible applicants are identified in the new Section 104(k) of "The Small Business Liability Relief and Brownfields Revitalization Act." Entities eligible to apply for grants under this new authority include local governments (including quasi-governmental entities such as regional councils and redevelopment agencies), States, Tribes and non-profit organizations. The eligible entities under this new authority is broader than EPA's current program and will enable the Agency to assist many more than 20 to 30 communities.

With regard to sub-urban communities, EPA's past experience with assessment pilots has resulted in awards of between 40-45 percent (176 of 399 pilots awarded) to communities with populations less than 100,000. The Agency's grant application guidelines will be published in the Fall of 2002. In developing the guidelines, the Agency will use the ranking criteria in The Small Business Liability Relief and Brownfields Revitalization Act, which included a specific requirement for the fair distribution of grant funding between urban and "nonurban" areas to ensure a fair and nationally competitive process for the determination of grant awards.

In developing its guidelines, the Agency will continue to ensure an appropriate urban and non-urban distribution of its grants. While the Act explicitly calls for a fair distribution between urban and "nonurban" areas, it has also been the practice of the Agency to ensure that grants have an appropriate geographic distribution. Currently, 48% of assessment grants have gone to areas with populations of less than 100,000. In addition, EPA has assessment grants in all 50 states. To more fully assist small and rural communities, the Brownfields program funded the recently published report, "Reclaiming Rural America's Brownfields" (April 2001).

Congressman Hobson

WATERSHED: FOCUS ON RURAL COMMUNITIES

Question: The Targeted Watersheds Project is a new $21 million program to provide grants to watershed stakeholders ready to implement comprehensive restoration action. Targeted watersheds will be chosen based on criteria established in consultation with state and local partners.

I agree that we need to take a comprehensive, watershed approach to protecting our waterways. Over the past several years, I've been working with the state of Ohio to protect an area called the Darby Watershed through the CREP program, so it can remain farmland but at the same time clean up the waterways.

As in the Darby and other rural parts of my district, the most successful protection approach is from the bottom-up. This involves educating the local community, including farmers, and providing them with the tools to meet the new water protection standards mandated by the EPA.

Will your new watershed program have a focus on rural communities?

Answer: Many of the key aspects of the Watershed Initiative have not yet been decided and the Agency is in the process of soliciting comments and ideas from many stakeholders. Over the next two weeks, the Agency will be publishing a notice in the *Federal Register* requesting input from the general public. We are particularly interested in the public's views and ideas on the nomination and selection process.

EPA has no preconceived notions about what the selection criteria should be and is asking its many partners for assistance in developing them. One of the questions that will be posed is: Should there be established parameters, such as size or geographical location, for eligible watersheds? At present EPA is not making any distinctions between rural and urban watershed and is inclined to support a variety of watershed scales and geographic locations. The appropriate size and location of the watershed and/or project area may depend on the local circumstances, the level of impairment, and other factors. Monies may be awarded based on the scale of the project, the anticipated need, and the amount requested.

Congressman Hobson

WATERSHED: FOCUS ON RURAL COMMUNITIES

Question: How much of the $21 million do you anticipate spending in rural versus urban areas?

Answer: No decisions have been made regarding selection criteria, though EPA is inclined to support a variety of project locations.

EPA has no preconceived notions about what the selection criteria should be and is asking its many partners for assistance in developing them. One of the questions that will be posed is: Should there be established parameters, such as size or geographical location, for eligible watersheds? At present EPA is not making any distinctions between rural and urban watershed and is inclined to support a variety of watershed scales and geographic locations. The appropriate size and location of the watershed and/or project area may depend on the local circumstances, the level of impairment, and other factors. Monies may be awarded based on the scale of the project, the anticipated need, and the amount requested.

Congressman Hobson

PESTICIDE TOLERANCE FEES: COLLECTION
AND SPENDING OF $44 MILLION

Question: *Background: For the past 3 years, VA/HUD appropriations bills have included language that prohibits the EPA from increasing pesticide tolerance fees. These fees are assessed to cover the cost of the EPA tolerance levels on the amount of pesticides/chemicals that can be present in foods. Under the Clinton Administration, the EPA tried to drastically increase these fees, and even assess these increase retroactively.*

I see that EPA anticipates collecting $59 million in pesticide tolerance fees in FY03; however, you are only obligated to spend $15 million. Your budget justification states, "The remaining collections would be used at some future time."

Since our farmers and consumers are the ones who will bear the increased cost of these pesticide tolerance fees, I am interested in why the EPA would think it is in the best interest of the American people to collect $44 million dollars more than necessary. And, do you have any specific plans for spending this money in the near future?

Answer: The statute calls for the collection of fees that will "in the aggregate, be sufficient...to provide, equip and maintain" the tolerance program. The statute reflected the accepted government principle that the recipients of a special benefit from the federal government, should pay for that special benefit. OMB guidance on the collection of fees also refers to collecting the full costs of the program, and indeed the Biennial Fee review required under the law calls for an explanation if full costs are not recovered. In addition, there is a fairness question if the early tolerance reassessments do not have to be paid for, but the later ones do. For these reasons, the proposed tolerance fee rule of 1999 uses a full life cycle cost analysis as the basis for the fee schedule. At that point, the tolerance reassessment program had been in place for about 18 months.

Subsequently, Congressional action prohibited the agency from proceeding with the final rule, in 2000, 2001 and 2002. This has the effect of increasing the numbers of years the program is in place without fee collections - increasing the proportion of 'back' or retroactive collections. The President's Budget is based on current law and current statute in this area and assumes that the statutes provisions will go forward, i.e., the tolerance fee rule will be finalized. The higher level of 'back' collections increases the difference between projected obligations in the budget year, and projected fee revenue, that you refer to in your question.

The statute envisions an ongoing review of pesticides after the completion of the tolerance reassessment program and this might be an appropriate use of these funds.

Congressman Hobson

PESTICIDE TOLERANCE FEES: INCREASE

Question: Also, if I remember correctly, this Subcommittee allocated $20 million for FY 2002 pesticide reregistration and maintenance costs, while also prohibiting an increase in tolerance fees. Could you explain why the EPA, despite these past prohibitions, has allocated for an increase in the cost of these tolerance fees?

Answer: The FY 2002 appropriation for the agency extended the authority to collect the Pesticides Maintenance fee for a year, at a level of $17 million, while prohibiting promulgation of the final tolerance fee rule. As previously mentioned, the President's Budget is based on current law and current statute in this area and assumes that the statute's provisions will go forward, i.e., the tolerance fee rule will be finalized.

Congressman Hobson

NPDES: IMPLEMENTATION OF GUIDELINES

Question : Does the EPA have any plans to implement guidelines that would require National Pollutant Discharge Elimination System permits for the use of aquatic pesticides in irrigation canals?

Answer: EPA recently issued an interpretative statement that provides guidance on this issue. The interpretative statement (*"Interpretative Statement and Regional Guidance on the Clean Water Act's Exemption for Return Flow from Irrigated Agriculture"*) was issued on March 29, 2002. Its focus is on the applicability of a Clean Water Act exemption for return flows from irrigated agriculture from NPDES permit requirements. The statement provides that application of an aquatic herbicide consistent with its FIFRA label to ensure the passage of irrigation return flow is exempt from NPDES permitting requirements under the Clean Water Act.

On March 29, 2002, EPA also issued a memorandum extending its "Low Enforcement Priority" for other applications of pesticides to water. This memorandum, initially issued on May 31, 2001, indicates that "any direct application of pesticides to waters of the United States would be a low enforcement priority provided certain conditions intended to ensure appropriate protection of human health and the environment were met." The protective conditions laid out in the original memorandum are that the registered pesticide product must be applied in a manner consistent with its labeling and that there are no egregious circumstances, such as those resulting in serious actual harm or which may present an imminent and substantial endangerment to public health or the environment. The extension expires March 31, 2003.

Congressman Hobson

NPDES: COSTS TO PROCESS AND ENFORCE PERMIT APPLICATIONS

Question: If you do in fact have plans to implement further regulations for NPDES permits, could you comment on the cost to our farmers, as well as the cost to your agency to process and enforce the permit applications you would receive?

Answer: The protective conditions in the interpretative statement provides that application of an aquatic herbicide consistent with its FIFRA label to ensure the passage of irrigation return flow is exempt from NPDES permitting requirements under the Clean Water Act.

EPA recently issued an interpretative statement that provides guidance on this issue. The interpretative statement (*"Interpretative Statement and Regional Guidance on the Clean Water Act's Exemption for Return Flow from Irrigated Agriculture"*) was issued on March 29, 2002. Its focus is on the applicability of a Clean Water Act exemption for return flows from irrigated agriculture from NPDES permit requirements. The statement provides that application of an aquatic herbicide consistent with its FIFRA label to ensure the passage of irrigation return flow is exempt from NPDES permitting requirements under the Clean Water Act.

Questions Submitted for the Record by Congressman Knollenberg

EGU GROWTH: DEFENSE OF GROWTH ALLOCATION CALCULATIONS

Question: I am concerned about EPA's growth assumptions for the electric generation unit (EGU) sector that were incorporated into the NOx budget. It has been over a year since the State has brought this to the Agency's attention and we still do not have answers. The Michigan Department of Environmental Quality and the Michigan Public Service Commission have made a strong case that your agency's methodology significantly underestimated the actual rates of growth that have been observed over the past five years in Michigan. The District of Columbia Circuit Court of Appeals also acknowledged the discrepancy of the growth rates in its remand in Appalachian Power Co. v EPA on May 15th, 2001. It stated:

> "Despite the apparent disparity between the EPA's growth projections and observed growth rates, the EPA claims its growth factors were reasonable and due deference from this court. Yet even in the face of evidence suggesting the EPA's projections were erroneous, the EPA never explained why it adopted this particular methodology. The EPA claims it made a reasonable choice—and it may be right—but simply to state such a claim does not make it so. There must be an actual reason articulated by the agency at some point in the rulemaking process. There is none here."

The Court went on to state:

> "As a result, we have no choice but to remand the EPA's EGU growth factor determinations so that the agency may fulfill its obligation to engage in reasoned decision making on how to set EGU growth factors and explain why results appear arbitrary on their face, are in fact, reasonable determinations."

In a notice of availability data published in the Federal Register on August 3, 2001, EPA states that after a preliminary review, its growth calculations were reasonable and can be supported with a more robust explanation.

What led to your agency's decision to defend rather than adjust its growth allocation calculations?

Answer: EPA believes that it used a reasonable methodology to develop growth rates that treat all states consistently and fairly. EPA developed the growth rates using the Integrated Planning Model, a nationally recognized model that takes into account the complex nature of the nation's electricity generation system. Furthermore, EPA does not believe that one or two years of high fossil fuel use in a given state suggest that fossil fuel use in that state will continue to grow. For instance, in Michigan fossil fuel use peaked in 1998 and has decreased every year since then.

Congressman Knollenberg

EGU GROWTH: DELAY IN PROVIDING JUSTIFICATION FOR CALCULATIONS

Question: In a letter sent to Governor John Engler, dated October 30, 2001, Assistant Administrator Jeffrey Holmstead stated that EPA plans on making a decision regarding EPA's response to the court's remand in November 2001. It has been nearly five months since Assistant Administrator Holmstead sent that letter, 7 months since EPA has decided to defend its calculations and 10 months since the Court's remand.

What is the cause for the delay in providing the justification for your calculations?

Answer: EPA believes that this is an important issue that deserves careful consideration. In response to the court's remand, EPA has considered a great deal of additional data. In late 2001, after Assistant Administrator Holmstead sent his letter, EPA decided that it should review 2001 data to see if it still supported its decision to defend the growth rates. Because much of this data was not available until, early 2002, EPA's response has been delayed. Furthermore, after the data became available, EPA notified the public of its intention to consider this additional data. EPA elected to further delay action, to provide additional parties additional time to review the data.

Congressman Knollenberg

EGU GROWTH: GROWTH CALCULATION FACTORS FOR MICHIGAN

Question: The EPA has asserted that the decrease in 2000 heat input levels from 1998 and 1999 levels is due to Cook Nuclear plant coming back online, and conversely that the higher levels in 1998 and 1999 reflect increased fossil generation to make up for Cook being offline. However, the Cook Nuclear plant, located in Bridgman, Michigan, is part of the American Electric Power (AEP) system. The vast majority of the electricity generated by AEP system plants in Michigan goes to out-of-state customers. The customers normally served by Cook would still be served by AEP, from generation by their units outside of Michigan. Therefore, the effects of the Cook Plant during 1998 through 2000 and during the projection period would be negligible on Michigan's fossil fuel generation.

Since the EPA has not provided us with information on their growth calculation for Michigan, will you tell me if you took these factors into account when determining the growth calculations? If you did not, why didn't you?

Answer: EPA agrees that the Cook Nuclear Plant provides an excellent example of the complex nature of the nation's interstate electricity generation and transmission system. That is why EPA elected to use a nationally recognized model (whose use was upheld by the court and which has been used in other EPA rulemakings dating back to 1996), to develop the growth rates. The fossil fuel heat input in Michigan, which in 1998 was close to EPA's 2007 projection, has declined since 1998. EPA believes that the high fossil fuel input in 1998 was due to several factors, including unusually low nuclear generation in the State. Furthermore, while the Michigan State Public Utility Commission (PUC) has indicated to EPA that they do not believe that the Cook Nuclear Facility affects the use of fossil generation, documents created by the PUC provide a contradictory view. For instance, in a number of its recent winter and summer energy reviews, the PUC has highlighted the fact that the return of these units improves the supply of electricity in the State of Michigan. Furthermore, fossil fuel use for power generation has decreased every year since 1998. This is despite the fact that electric demand has increased and a number of new fossil-fuel-fired plants have opened up in the State of Michigan.

Congressman Knollenberg

EGU GROWTH: DETROIT EDISON'S MONROE PLANT LEVELS

Question: Further, the year 2000 heat inputs for Detroit Edison's Monroe plant fell from 1998 and 1999 levels. This decrease was a result of operational problems experienced at the plant last summer and do not accurately reflect normal operation at the plant.

Did the EPA take these factors into account when determining the growth calculations? If you did not, why didn't you?

Answer: EPA does believe it has considered the impact of the Monroe unit. First, EPA believes that it is important to look at the electric generating system as a whole, rather than on an individual unit basis when evaluating changes in state heat input. The reduced generation from the Monroe Plant could very well have been offset by increased generation at another plant. For instance, the Dan E. Karn plant operated at significantly higher levels in the year 2000, than it did in previous years. Furthermore, even if you assume that none of the lost generation from the Monroe Plant was offset by additional units within the State of Michigan, this only explains part of the heat input decrease between 1999 and 2000, it does not explain the heat input decreases between 1998 and 1999 and between 1999 and 2001.

Congressman Knollenberg

EGU GROWTH: STATE OF MICHIGAN NEW SOURCE GROWTH

Question: The EPA acknowledges it is important to be able to accommodate new source growth. Since 1998, Michigan has received permit applications for 50 EGUs, where at least 30 of which have been permitted. These units are all projected to start up over the next 2 years.

Does EPA's growth calculation for the State of Michigan accommodate these opportunities for new source growth?

Answer: Yes. Michigan's heat input has never exceeded EPA's 2007 projections. Furthermore, it has decreased every year since 1998. Therefore EPA believes that a review of the heat input data indicates that there is room for growth within the State of Michigan. Furthermore, many of the companies that have built, begun to build or have announced the intention to build plants in Michigan are independent power producers. They have the choice to locate units in many states. The fact that they have chosen to build these units in the State of Michigan even after EPA finalized its SIP Call and Section 126 budgets suggest that these sources do not believe that the budgets will be a serious impediment to their ability to operate. This is probably because the SIP Call does not cap fossil-fuel use, it caps NOx emissions. Since most of the new units locating within the State of Michigan are clean gas-fired units, they cause NOx emissions to grow at a much slower rate than they cause heat input to grow. Therefore, these new units should not impede Michigan's ability to meet its budget.

Congressman Knollenberg

EGU GROWTH: STATE FLEXIBILITY

Question: This growth calculation will have serious ramifications to businesses, citizens and the economy in the State of Michigan. I urge the EPA to take into account the unique situations in which Michigan finds itself instead of using a one-size fits all formula. Further, I urge EPA to quickly resolve this issue so that the State can have adequate time to comply with regulations and deadlines the EPA has imposed upon them in this area.

Since the EPA has been slow to provide answers to the State, will you be flexible with the State in meeting your deadlines?

Answer: Yes, the deadline for meeting the requirements of the SIP Call and the Section 126 has been moved from May 1, 2003 to May 30, 2004. Furthermore, many of Michigan's neighboring states (including Illinois, which has also raised concerns about the growth rates) have already submitted SIPs to EPA (which EPA has approved) meeting the requirements of the SIP Call. Therefore, EPA believes that the state (and the sources within the state), should have sufficient time to meet the requirements of the SIP Call.

Questions Submitted for the Record by Congresswoman Northup

LOUISVILLE BRIDGE PROJECT: AGENCY RESPONSIBILITY FOR ELEMENTS OF DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)

Question: What elements of a DEIS does EPA consider it's responsibility on which to comment? Air Quality, Water Quality others?

Answer: Section 309 of the Clean Air Act gives EPA the responsibility to comment on the potential impacts of federal actions to public health, welfare and environmental quality. Specifically it requires EPA to review and comment on environmental impact statements (EIS) published by other federal agencies in accordance with the National Environmental Policy Act (NEPA). The adequacy of the document is reviewed to see if the agency disclosed all significant potential environmental impacts to the public and the decision-maker well enough to make an informed decision. In commenting on the overall impacts and adequacy of the documents, EPA looks to the broader elements of public health, welfare and environmental quality and does not typically limit its comments to those areas for which EPA has specific regulatory jurisdiction, i.e., where we permit discharge, etc.

EPA ensures timely reviews of EISs by adhering to the deadlines set forth in the Council on Environmental Quality's NEPA implementing regulations (40CFR Parts 1500-1508) or to the deadlines given by the responsible agency, in this case FHWA. For some highway projects EPA is asked to become involved earlier in the FHWA/state DOT's process. In those cases, often the state, FHWA and other agencies will agree on cooperatively determined deadlines at the start of the process. EPA has been involved in the Ohio River Bridges project since October 1998. Both EPA Regions 4 and 5 have participated actively in the development of the project, by providing comments on scoping materials and pre-drafts and attending numerous interagency meetings. We are pleased to report that many of the issues EPA originally had with this project have been resolved. EPA continues to support the need to relieve congestion and improve safety in downtown Louisville. EPA expects to address the remaining issues of air, water and noise concerns and habitat impacts, and suggested ways to mitigate these, in our comments on the draft EIS.

Congresswoman Northup

LOUISVILLE BRIDGE PROJECT: LAND USE PLANNING AND ZONING; "SPRAWL" VS. "PLANNED GROWTH

Question: Does the EPA consider that Land Use Planning and Zoning are a local responsibility and not EPA's? Is how a community wants to develop primarily their concern not a Federal one? This leads to how does EPA define "Sprawl" versus "Planned Growth"? Who makes the determination of what is "sprawl and what is "planned growth"?

Answer: Land use planning is a local responsibility, but it is appropriate for EPA to raise the issue of sustainable development and smart growth because of the potential environmental consequences growth may cause and to ensure that those potential impacts are disclosed adequately so they may be considered by the final decision-maker.

Congresswoman Northup

LOUISVILLE BRIDGE PROJECT: AGENCY RESPONSIBILITY TO COMMENT ON HISTORIC PRESERVATION OR CULTURAL ISSUES

Question: Does EPA have any responsibility to comment on Historic Preservation or Cultural issues or is this an FHWA , Advisory Council on Historic Preservation and State Historic Preservation Office (SHPO) issue?

Answer: It is the responsibility of the FHWA to determine if any of its undertakings will have an effect on historic properties, and if so, initiate consultation with the State Historic Preservation Officer (SHPO). If appropriate, the Advisory Council on Historic Preservation (ACHP) also may be invited to join the consultation. The ACHP is comprised of twenty members; six of whom are representatives of Federal agencies. The EPA Administrator is one of the twenty members. Under EPA's ACHP responsibility and our Section 309 responsibilities, EPA provides comments on historic and cultural resources from time to time. In the case of the Ohio River Bridges project, EPA staff deferred to the parties involved in the Section 106 consultation and recommended the results of the consultation be included in the final EIS.

Congresswoman Northup

LOUISVILLE BRIDGE PROJECT:
FORECASTING FUTURE TRAFFIC DEVELOPING

Question: Is the responsibility for developing local traffic models and forecasting future traffic that of the Regional Planning Organization, in my case KIPDA? If this is the case is this information used as submitted in EPA's evaluation of the EIS. Your agency isn't charged with traffic engineering is it?

Answer: While EPA is not charged with traffic engineering or traffic model development, EPA does have a responsibility in its review of EISs to ensure that the information as presented is adequate for the decision-maker as well as the public to understand fully the potential impacts to human health or welfare, or the environment from the proposed action. On major actions, such as the Ohio River Bridges project, EPA sometimes is invited to participate earlier in the process so that the information being developed satisfies EPA's 309 responsibilities at the draft EIS stage.

Congresswoman Northup

LOUISVILLE BRIDGE PROJECT: TIMELY REVIEW OF EIS

Question: Timely reviews by Federal Agencies seem to continually be an issue not only in my project but throughout the Nation. What can we do to help in this regard? Is this an issue adequate qualified staff?

Answer: Congress recognized that Federal agencies are resource constrained and that a lack of adequate staff may affect agencies' ability to complete timely reviews of a project. Congress therefore provided in section 1309(e) of the Transportation Equity Act for the 21st Century (TEA-21) that states may fund a state or federal resource agency to speed the environmental review process. Where states have taken advantage of this authority, the funding has enabled EPA to dedicate NEPA review staff to the state's priority transportation projects and to provide earlier and more sustained assistance. Such staff are also able to work on program-wide improvements such as cross-training of state and federal staff and developing coordinated state-federal processes for streamlining reviews.

Question: Should we be delegating more of this responsibility to State agencies? I understand that the Transportation and Infrastructure Committee is developing such a time saving process. Will you be supporting that effort?

Answer: EPA understands that the Transportation and Infrastructure Committee is drafting a bill that would provide for delegation of Federal agency responsibilities to the States. EPA is pleased to work with the Committee on any time saving effort that serves the twin goals of meeting the nation's transportation needs while protecting public health and the environment. At such time as the bill is enrolled, EPA will work within the Administration to provide our expertise on these issues.

Congresswoman Northup

LOUISVILLE BRIDGES PROJECT: SECTION 309 OF CLEAN AIR ACT
INVOLVEMENT IN EPA REVIEW OF EIS

Question: To what level of involvement does section 309 of the Clean Air Act provide for EPA reviews and how does EPA ensure timely reviews for major projects such as the Louisville Bridges.

Answer: Section 309 of the Clean Air Act gives EPA the responsibility to comment on the potential impacts of federal actions to public health, welfare and environmental quality. Specifically it requires EPA to review and comment on environmental impact statements (EIS) published by other federal agencies in accordance with the National Environmental Policy Act (NEPA). The adequacy of the document is reviewed to see if the agency disclosed all significant potential environmental impacts to the public and the decision-maker well enough to make an informed decision. In commenting on the overall impacts and adequacy of the documents, EPA looks to the broader elements of public health, welfare and environmental quality and does not typically limit its comments to those areas for which EPA has specific regulatory jurisdiction, i.e., where we permit discharge, etc.

EPA ensures timely reviews of EISs by adhering to the deadlines set forth in the Council on Environmental Quality's NEPA implementing regulations (40CFR Parts 1500-1508) or to the deadlines given by the responsible agency, in this case FHWA. For some highway projects EPA is asked to become involved earlier in the FHWA/state DOT's process. In those cases, often the state, FHWA and other agencies will agree on cooperatively determined deadlines at the start of the process. EPA has been involved in the Ohio River Bridges project since October 1998. Both EPA Regions 4 and 5 have participated actively in the development of the project, by providing comments on scoping materials and pre-drafts and attending numerous interagency meetings.

Congresswoman Northup

DRINKING WATER GAP ANALYSIS

Question: And if not, don't you believe this is an area which would be helpful to water delivery systems and water consumers nationwide?

Answer: The Agency recently completed research on water infrastructure for the Gap Analysis Report (Gap Report). This Report estimates the difference, or "gap," between the 20-year projected infrastructure need and current spending levels. Eight industry experts from outside the Agency have evaluated the Gap Report and commend it as a reasonable effort to quantify this infrastructure gap. The Gap Report is now at OMB and is scheduled to be released to the public later this year. In developing the report, EPA noted that further research would help future efforts to understand water infrastructure needs. EPA intends to address the research needs and policy implications in future work, while continuing to promote infrastructure programs and research already underway that help ensure the provision of safe water.

To help drinking water systems finance their infrastructure infrastructure, Congress has appropriated $5.3 billion to the Drinking Water State Revolving Fund (DWSRF) through 2002. The President's FY 2003 Budget request for the DWSRF maintains the $850 million level provided in FY 2002.

Congresswoman Northup

STREAM RESTORATION RESEARCH: SCIENCE AND DEVELOPMENT OF NEW TECHNOLOGY

Question: Construction, land development, mining, and agricultural activities have changed watershed characteristics. To address related issues, efforts have been made to return stream conditions to those which resemble their pre-disturbed habitat. Despite these efforts, little is known about the effectiveness of such techniques. Does the EPA believe that research in the science of stream restoration and the development of new techniques would be appropriate?

Answer: Yes. The goal of EPA's stream restoration research is to provide research results to assist States and local interests in restoring the ecological and designated use functions of degraded systems. A recently released study of riparian areas (the transitional zones between terrestrial and aquatic ecosystems) by the National Academy of Sciences/National Research Council (NAS/NRC) reaffirms the critical role these areas play in maintaining water quality; ensuring the sustainability of fish and wildlife species, and reducing the impact of flood events. Most riparian and stream restoration efforts are currently directed at restoring flow characteristics, preventing or reversing stream-bank erosion, and aesthetic considerations. Relevant restoration approaches for these purposes are available and reasonably well understood.

However, knowledge of how to restore streams and riparian areas to maintain and improve water quality and ecological functions, which are the goals of the Clean Water Act, is much less well developed. The NAS/NRC report notes that "Unless new evaluation procedures are developed that consider both the water quality and ecological functions of riparian zones, it is unlikely that riparian zone size and composition will be determined in a way that optimizes their potential for environmental protection." With this in mind, EPA's research program is designed to evaluate the benefits to water quality of current restoration practices and to develop new techniques. The Office of Research and Development's (ORD) ecosystem restoration research program is focusing on riparian area restoration. If it can be shown that restoration of riparian zones provides substantial benefits to water quality, then watershed management to achieve Clean Water Act requirements may be less costly and more efficient than programs that treat or restore all areas within the watershed.

Questions Submitted for the Record by Congressman Goode, Jr.

DREDGING: CONTAMINATED SEDIMENT

Question: Has EPA ever before performed or supervised an environmental dredging project involving several million cubic yards of contaminated sediment?

Answer: EPA has proposed and selected dredging projects of this magnitude, but has not completed one this large.

Congressman Goode

DREDGING: LARGEST CONTAMINATED SEDIMENT DREDGING PROJECT TO DATE

Question: What is the largest contaminated sediment dredging project that EPA has performed or supervised to date?

Answer: The Sitcum Waterway project which is part of the Commencement Bay/Nearshore Tideflats Superfund Site in Tacoma, Washington is the biggest completed dredging project so far. It involved dredging 428,000 cubic yards of contaminated sediments from Sitcum Waterway, 874,600 cubic yards from the adjacent Blair Waterway, and 1,225,400 cubic yards of clean sediments from Blair Waterway which were used for construction of the nearshore fill berm at the mouth of nearby Milwaukee Waterway. The total volume dredged was 2,528,000 cubic yards.

Question: How long did it take to do the project?

Answer: The dredging of Sitcum and Blair waterways, the construction of the nearshore fill disposal site, and the disposal of contaminated sediments took approximately 1 year (November 1993 to November 1994), including mobilization and demobilization.

Question: What did it cost per cubic yard of sediment dredged?

Answer: The total cost of the project was approximately $22.5 million. This cost included all the dredging, construction of the Milwaukee nearshore fill disposal site, placement of dredged contaminated sediments into the Milwaukee nearshore fill, and the construction of two habitat mitigation sites. As the Potential Responsible Party (PRP) did the work, we do not have detailed cost breakdowns for different aspects of the project. Total cost per cubic yard including all sediments dredged (clean and contaminated), and the total project cost (including disposal and habitat mitigation) is then: $22,500,000/2,528,000 cubic yards, or approximately $8.9 per cubic yard. These costs are in 1993 dollars.

Question: What was the cleanup standard at that site?

Answer: Cleanup of the Sitcum Waterway used the same site specific cleanup criteria reported in the 1989 Commencement Bay/Nearshore Tideflats Record of Decision. In the absence of promulgated state sediment cleanup standards at that time, EPA developed site-specific cleanup levels (Sediment Quality Objectives or SQOs). The chemical specific SQOs for Sitcum Waterway are provided below and are presented on a dry-weight basis. All SQOs for this cleanup were based on ecological risks.

arsenic - 57 mg/kg
cadmium - 5.1 mg/kg
copper - 390 mg/kg
nickel - 140 mg/kg
zinc - 410 mg/kg
Low molecular weight PAHs - 5,200 ug/kg
High molecular weight PAHs - 17,000 ug/kg

Congressman Goode

DREDGING: 28 MILE PIPELINE

Question: Has EPA ever before built a 28 mile pipeline for the transport of contaminated sediments?

Answer: EPA has not built such a long pipeline at a Superfund site to transport the contaminated sediment slurry from the dredge to the on-shore storage or treatment facility.

Congressman Goode

DREDGING: SEDIMENT SLURRY PIPELINE

Question: What is the longest sediment slurry pipeline that EPA has built to date?

Answer: EPA does not keep or track information on the length of pipelines, but we believe the average length of typical sediment slurry pipelines is less than 3 miles.

Question: How much sediment did it transport? What did it cost?

Answer: While the Agency does not track this kind of information, what we can say about cost and volume is that sediment transport pipelines are undoubtedly carefully designed to meet project-specific and site-specific goals. Depending on the specific gravity of the sediments, the nature of terrain across which the materials would be pumped, the size and tensile strength of the piping used, the hydraulic head that would have to be overcome, and the number of pumping stations required to pump the sediment materials from the water body to the disposal site, the costs may vary significantly from site to site.

Other major cost factors include whether the pipeline could be constructed above or below ground and whether there would be waterways or urban areas that would need to be crossed. Above ground pipelines would be cheaper to construct and it would be easier to detect leaks. However, while a buried pipeline may be more costly, it may also be safer. If buried below the frost line, it could enable the pipeline to function most of the winter season. Leaks on a buried pipeline are determined by pressure sensors built into the pipeline control structure and would not be that difficult to detect, but finding exactly where a leak occurs is harder to do because you have to dig up the pipeline. If the buried pipeline went through acidic soils, through waterways, and swamps it would require more in the way of cathodic protection and this would add to capital costs. Lastly, for any type of pipeline, there is the question of right-of-way acquisition costs. There may be the need to buy or lease right-of-way access from public utility companies or private landowners to accommodate the pipeline route.

Question: What provisions were incorporated to address potential for freezing? For leaks?

Answer: At some of EPA's sediment dredging sites, the sediment slurry pipeline has been constructed using double-walled pipe to prevent leakage. Monitoring and pipeline pressure gauge indicators would likely provide early notification in the unlikely event of any leaks, allowing quick mitigation measures.

With respect to your question on safeguards to prevent pipeline freezing, EPA's normal practice in cold climates is to cease dredging operations in the winter months due to worker safety concerns caused by icy surfaces. The process of pumping sediment solids through a pipeline will

normally generate some degree of intrinsic heat and therefore the early onset of cold weather should not be a problem.

Congressman Goode

DREDGING: "ITERATIVE APPROACH" TO SITE REMEDIES

Question: I understand that EPA's new sediment management guidance recommends an "iterative approach" to site remedies. Does this mean that EPA will generally implement remedies for large river sites in phases, starting upstream and working downstream, so that EPA can learn from the work and modify the remedy as appropriate during implementation?

Answer: The use of an iterative approach applies to the entire site investigation process, not just to the remedy implementation part of the cleanup process. When EPA designs the dredging process used at rivers, it normally requires that dredging occur in an upstream to downstream direction in order to minimize the potential for re-contamination of clean sediments.

Congressman Goode

DREDGING: POTENTIAL DISPOSAL SITES

Question: Given the importance of local disposal sites both to sediment dredging costs and to public acceptance of the remedy, should EPA try to identify and tell the public about potential disposal sites by the time a remedy is proposed for public comment?

Answer: If EPA is going to propose creating a local disposal site, it is important to provide information to the local community on the potential sites under consideration by the time that a remedy is proposed for public comment. However, if the dredged material is to be transported to a distant, existing licensed facility, then the need to identify the specific disposal facility is not an important component for the proposed plan or the decision document.

Questions Submitted for the Record by Congressman Aderholt

NATIONAL RURAL WATER ASSOCIATION

Question: The work of the Alabama Rural Water Association has been instrumental in helping many communities in my district comply with regulations. As you know, they receive funding from EPA through the National Rural Water Association (NRWA). Most people are willing to follow regulations without heavy-handed action, and the on-site assistance provided by the NRWA's circuit riders helps people follow the law and protect the environment. The association is interested in participating in the rural source water protection program, and I would appreciate hearing your thoughts on possibly expanding that program. Obviously I am interested in Alabama Rural Water being able to participate.

Answer: The 1996 SDWA Amendments require the States to ensure that all 165,000 public water systems conduct an assessment of the quality of their drinking water sources. These assessments include: 1) the delineation of the physical area surrounding drinking water sources; 2) identification of actual or potential sources of contamination in the source water area; and, 3) the determination of the susceptibility of drinking water supplies to contamination by identified contamination sources.

In FYs 2002 and 2003, EPA's primary objective in the area of source water protection is to implement these source water-related provisions of the 1996 Amendments to the Safe Drinking Water Act (SDWA). Alabama Rural Water's participation in the source water protection program would be based upon recommendations from EPA Region 4, and selection would be made by NRWA in consultation with EPA Headquarters. EPA will continue to provide technical assistance, training and guidance to the States as they strive to meet the statutory deadline for completion of all source water assessments by May 2003.

Congressman Aderholt

IMPACT OF ARSENIC AND RADON STANDARDS ON SMALL SYSTEMS

Question: As you know, more stringent arsenic and radon standards will have a great financial impact nationwide. Lower income areas, such as rural Alabama, will be especially affected. Does the EPA plan to offer any financial assistance to help with this transition, other than state revolving funds?

Answer: EPA is committed to helping small communities meet the new arsenic in drinking water standard. To help small systems comply with the arsenic, radon and all other drinking water standards, EPA is committed to using the full range of options provided under the Safe Drinking Water Act, including exemptions and Point-of-Use devices. To guide the Agency as we carry out our strong commitment to small systems, EPA is developing a *Small Systems Implementation Strategy* , which will focus initially on the arsenic rule but also will address all other rules. The Small Systems Implementation Strategy emphasizes working with States to take advantage of the options provided by the SDWA.

In addition to working with small water systems to maximize use of available grants and loans from the Drinking Water State Revolving Fund (DWSRF), the Agency has committed a total of $20 million over the next two years for research, development, and implementation of effective, practical and affordable treatment technologies for arsenic in drinking water.

EPA also will conduct ten training sessions on the new arsenic rule this year. These sessions are for EPA Regions, States, technical assistance providers, and drinking water systems, and will focus on state requirements, treatment technologies, waste disposal, and EPA's small system compliance strategy.

The research program consists of:

1. Small Business Innovative Research (SBIR): support for small business development of innovative treatment processes for cost-effective removal of arsenic in drinking water.

2. National Environmental Technology Competition (NETC): to recognize and reward innovative technologies that produce more effective and lower cost solutions to specified problem areas (e.g., arsenic removal) and to stimulate development where major technology gaps exist.

3. Treatment Technology Demonstrations: to evaluate performance and cost of various arsenic removal technologies.

4. Environmental Technology Verification (ETV): short-term performance verification studies of commercially-ready arsenic adsorption technologies.

5. Enhanced Internal Research Program: focused on managing residuals from arsenic treatment, improved exposure studies, and analytical methods, treatment process optimization and development of design manuals for arsenic removal technologies.

EPA also will conduct ten training sessions on the new arsenic rule this year. These sessions are for EPA Regions, States, technical assistance providers, and drinking water systems, and will focus on state requirements, treatment technologies, waste disposal, and EPA's small system compliance strategy.

Questions Submitted for the Record by Congresswoman Carrie Meek

BROWNFIELDS: USE OF FY 2003 FUNDS

Question: How do you intend to use this new money?

Answer: The President's FY 2003 request for Brownfields is $200 million which is an increase of $102 million above the FY 2002 Enacted level. The additional $102 million will support the redevelopment and revitalization of brownfields communities by providing additional funding for new and supplemental assessment demonstration pilots, Brownfields cleanup revolving loan fund (BCRLF) pilots, cleanup grants, direct funding to States and Tribes to support the State voluntary cleanup programs, and targeted assessments.

"The Small Business Liability Relief and Brownfields Revitalization Act" (the Act) provides for brownfields site characterization and assessment; cleanup; research, training, and technical assistance; and, development of State and tribal response programs. Grant application guidelines will be published in Fall 2002. The new funding is requested to be available in FY2003.

Congresswoman Meek

BROWNFIELDS: INVENTORY/ASSESSMENT STAGE

Question: Are we still in the inventory/assessment stage?

Answer: Given GAO's estimate that more than 450,000 brownfields properties exist, there are many more brownfields than EPA can expect to address. We continue to see the need for both inventory/assessment stage and cleanup funding. EPA has funded 2,824 properties and leveraged additional assessments on 1,033 properties totaling 3,857 properties assessed. Therefore, the financial assistance requested to be available in FY2003 will be used for both brownfields site inventory/assessment as well as cleanup in addition to research, training, and technical assistance, and the development of State and tribal response programs.

Congresswoman Meek

BROWNFIELDS: FY 2003 FOR CLEAN-UP

Question: Will these funds be used for actual clean up?

Answer: The financial assistance requested to be available in FY2003 will be used for brownfields site characterization, assessment, and cleanup in addition to research, training, technical assistance, and the development of State and tribal response programs.

Congresswoman Meek

BROWNFIELDS: COORDINATION WITH HUD

Question: How will you coordinate your brownfields program with HUD's?

Answer: New Sec. 104(5)(A)(ii) of the Act directs EPA to coordinate with other Federal agencies "to assist in making eligible entities aware of other Federal resources." Over the last five years, EPA has worked with more than 20 federal agencies to coordinate support for local brownfields efforts including HUD, the Departments of Commerce, Interior, and the Treasury, to name a few. Examples of that coordination include a Memoranda of Understanding (MOU) with these and other Federal Agencies and in the 28 Brownfields Showcase Communities that serve as models of interagency collaboration. HUD and EPA have had a Memorandum of Understanding since 1996 which recognizes EPA's lead in the environmental assessment and cleanup of brownfields properties and HUD's role in the redevelopment of brownfields.

Congresswoman Meek

BROWNFIELDS: LEVERAGING FUNDS

Question: What will EPA be doing to leverage state, local and private funds to aid in the cleanup?

Answer: Among the ranking criteria specified in the Act, EPA is pleased to see criteria which will allow the Agency to evaluate grants according to "the extent to which a grant will stimulate the availability of other funds for environmental assessment or remediation, and subsequent reuse of an area in which one or more brownfields sites are located." The Brownfields program will continue to coordinate with local government, state, and non-government groups to leverage Federal funding with private sector funding. As in previous years, the Agency will do so by providing outreach, curriculum development, job training, and technical assistance to community residents through cooperative agreements to community-based organizations, community colleges, universities, and private sector non-profit groups.

Since its inception, the EPA brownfields program has leveraged over $4 billion in public and private cleanup and redevelopment funds, assessed over 2,700 properties, and generated over 18,000 jobs.

Congresswoman Meek

BROWNFIELDS: PRIORITIZATION

Question: How will these funds be prioritized among the different EPA regions and among the different brownfields sites in the country?

Answer: EPA is conducting listening sessions and other outreach activities prior to developing implementation policies for this new authority. Grant application guidelines will be published in Fall 2002. The new funding is requested to be available in FY2003. Grants awarded under the Act will be awarded through a nationally competitive process specified in new Sec. 104(k)(5)(C) similar to the process employed under the current program.

Congresswoman Meek

TITLE VI: STATUS REPORT IN RESOLVING BACKLOG OF COMPLAINTS

Question: I wanted to ask you about how well the EPA is doing in resolving the backlog of compliance that have been filed under Title VI of the Civil Rights Act and to ask you for a status report on their resolution.

Answer: EPA announced the formation of the Title VI Task Force in May 2001. The Task Force was charged with resolving the backlog of administrative complaints filed with EPA alleging violations of Title VI of the Civil Rights Act of 1964 and EPA's Title VI regulations.

As of May 31, 2001, the Agency's Title VI complaint backlog consisted of 66 open Title VI complaints. Twenty-one of those complaints had been accepted for investigation. Forty-five complaints were still "under review," meaning that EPA had not yet made a jurisdictional determination whether to accept them for investigation, reject them, or refer them to another agency for appropriate action.

As of February 11, 2002, EPA had made jurisdictional determinations on all "under review" complaints, with the exception of five complaints which are held in suspension pending the outcome of parallel related litigation. The complaint backlog assigned to the task force has currently been reduced to 38, several of which are very close to resolution.

Congresswoman Meek

TITLE VI: PROGRESS OF PROCESS

Question: Title VI is really the backbone of Environmental Justice. The people who file these complaints are primarily minorities, and they file civil rights complaints to protect their children and their communities from the discrimination that results when state environmental agencies issue permits that concentrate toxic facilities and waste sites in people of color neighborhoods. It's not your fault that some of these complaints have been laying around for years, and I was encouraged when you decided last year to make resolving these complaints one of your priorities. How is the process going?

Answer: The Title VI Task Force has been operational since mid-July 2001. The Task Force has 13 full-time personnel from EPA's offices of enforcement, general counsel, regional counsel, solid waste, water, and civil rights. Together, the Task Force members have experience in most of EPA's program areas. There are two civil investigators who provide assistance to the Task Force on an as-needed basis. In addition, the Task Force has been calling upon the technical, policy, and legal expertise available in various EPA offices.

As of May 31, 2001, the Agency had 66 open Title VI complaints. Twenty-one of those complaints had been accepted for investigation. Forty-five complaints were still "under review," meaning that EPA had not yet made a jurisdictional determination whether to accept them for investigation, reject them, or refer them to another agency for appropriate action As of February 11, 2002, EPA had made jurisdictional determinations on all "under review" complaints, with the exception of five complaints which are held in suspension pending the outcome of parallel related litigation.

There are currently a total of 38 complaints in the backlog assigned to the Task Force. Twenty-seven of these complaints are in some stage of investigation by the Task Force; five complaints are suspended because of parallel related litigation (as mentioned above); two complaints are in alternative dispute resolution (ADR) and five complaints are under consideration for some form of mediation. Participation in ADR is voluntary, and mediation only begins if both parties agree to take part. If parties choose not to participate in ADR, or if ADR does not successfully resolve the complaint, the ADR cases return to the Task Force for investigation.

The Task Force is currently on track to resolve the Title VI complaints which comprised the EPA backlog as of May 31, 2001, during the two-year term for which the Task Force was created. However, if any complaints which are currently in the ADR process or which are held in suspension pending the outcome of parallel related litigation come back to the Task Force near the end of the Task Force term, it may not be possible to conclude those cases within the two-year term.

Congresswoman Meek

TITLE VI: PERMANENT GUIDELINES

Question: Had EPA established permanent guidelines on the handling of Title VI complaints?

Answer: EPA published two draft Title VI guidance documents in June 2000. The publication of the Draft Revised Investigation Guidance engendered significant commentary from a number of external stakeholders. Consideration of those comments is ongoing and will be shaped, to some extent, by the experience of the Title VI Task Force. The Draft Recipient Guidance was well received. The Agency intends to finalize the recipient guidance in the Spring of 2002.

Congresswoman Meek

TITLE VI: CURRENT BACKLOG OF CASES AND TIME FRAME

Question: What is the current backlog of cases, and what is your strategy for dealing with it?

Answer: There are currently a total of 38 complaints in the backlog assigned to the Task Force. Twenty-seven of these complaints are in some stage of investigation by the Task Force; five complaints are suspended because of parallel related litigation; two complaints are in alternative dispute resolution (ADR) and five complaints are under consideration for some form of mediation. Participation in ADR is voluntary, and mediation only begins if both parties agree to take part. If parties choose not to participate in ADR, or if ADR does not successfully resolve the complaint, the ADR cases return to the Task Force for investigation.

The complaints which are under investigation are assigned to a team of task force members; in most instances, the team consists of an attorney and a case manager, frequently assisted by a civil investigator. Components of the investigation may include acquiring relevant files from the recipient, researching other sources of information, interviews with the complainant and recipient, and an on-site field investigation.

Congresswoman Meek

TITLE VI: NEW CASES

Question: How many new cases have come in over the past year, and what is the time frame for dealing with these cases?

Answer: Nine new Title VI complaints have been filed with the Office of Civil Rights since the Task Force was created. The Office of Civil Rights is handling these complaints. Three of the complaints have already been rejected on jurisdictional grounds, two are under investigation, two are awaiting clarification from the complainant, and two are undergoing jurisdictional review.

Congresswoman Meek

TITLE VI: SUMMARY OF ISSUES INVOLVED IN RESOLVED CASES

Question: Please provide a summary. for the record, of the issues involved in the backlog cases resolved by your Task Force, and how these issues were resolved.

Answer: Eighteen complaints have been rejected on jurisdictional grounds since the Task Force was created. The most frequent grounds for rejection are untimeliness and lack of a federal financial assistance recipient. Four complaints have been withdrawn by complainants as prematurely filed; one complaint involving air emissions was withdrawn after the Task Force initiated an investigation; and one complaint which raised issues beyond the scope of EPA's authority was referred to another federal agency for consideration. Finally, one complaint, involving alleged discriminatory public participation processes was informally resolved.

Congresswoman Meek

TITLE VI: BUDGET REQUEST FOR THE RESOLUTION OF CASES

Question: What is your budget request for the resolution of Title VI cases, and how does it compare to last year's request?

Answer: EPA is requesting a total of $4.0 million and 25.9 workyears in FY 2003 to resolve Title VI complaints. The request in FY 2003 is lower than either the FY 2002 request or the FY 2002 Enacted level because the work is expected to be completed part way through FY 2003. The request in FY 2002 was $6.5 million and 29.7 FTE. The FY 2002 enacted level was $5.4 million and 29.7 FTE. The reduction in FY 2003 is premised on the Agency's completing the backlog of cases by June 2003. Thus, the bulk of the extramural dollars required to support the backlog of cases will be spent in FY 2002 and will not be needed in FY 2003.

	FY 2002 Request		FY 2002 Enacted		FY 2003 Request	
	Dollars in Millions	**FTE**	**Dollars in Millions**	**FTE**	**Dollars in Millions**	**FTE**
Office of Civil Rights – Title VI Program	$2.4	14.5	$2.4	14.5	$2.7	14.5
Office of Enforcement and Compliance Assurance – Title VI Task Force	$4.1*	15.2	$3.0	15.2	$1.3	11.4
TOTAL:	$6.5	29.7	$5.4	29.7	$4.0	25.9

Congresswoman Meek

ENVIRONMENTAL EDUCATION

Question: Ironically, this highly successful program was created by the National Environmental Education Act that George Bush Sr. signed into law in 1990. I don't want to get you in trouble, but was this EPA's recommendation, or did this come from OMB?

Answer: The President's FY 2003 Budget proposes to transfer the funding ($9.2 million) and the grants function of the Environmental Protection Agency's (EPA) Office of Environmental Education to the National Science Foundation (NSF). The President's budget includes an assessment that this program that rated this program ineffective. Consolidating this program with NSF's math and science programs would better serve students and educators.

Congresswoman Meek

ENVIRONMENTAL EDUCATION

Question: I understand that EPA's Environmental Education Program makes high-profile low cost matching grants - in hundreds of communities each year. Is that so?

Answer: The Environmental Protection Agency's (EPA) Office of Environmental Education makes matching grants from the national headquarters, and the ten regional offices.

Question: Do you know how many communities have received grants since the program was started?

Answer: Approximately 1,600 communities have received environmental education grants from the EPA's Office of Environmental Education since 1992.

Question: What is the average size of each grant?

Answer: During the eleven annual grant cycles between 1992 and 2001, there were approximately 2,300 grants awarded nationwide. Of those, 115 were awarded from EPA headquarters, and the average size was about $85,000. The ten EPA regional offices awarded 2,202 grants, and the average size of those grants was $7,671.

Question: Does EPA make any effort to leverage these funds?

Answer: A non-federal funding match of at least 25% is required for receipt of these grants and the grants are issued on a competitive basis.

Question: What is the current level of funding for this program?

Answer: The current FY 2002 level of funding is $9.2 million.

Question: What is EPA's assessment of this program?

Answer: The EPA's Office of Environmental Education program has awarded more than 2,300 grants nationwide and trained more than 100,000 educators over the past ten years. In addition, several hundred student fellowships and internships have been awarded.

Congresswoman Meek

ENVIRONMENTAL EDUCATION

Question: What is OMB's assessment of this program?

Answer: In the FY 2003 President's budget sent to Congress on February 4, 2002, EPA's environmental education program was rated ineffective and the budget proposed consolidating similar environmental education activities in one agency. The function of Environmental Education is better served by one agency, and the National Science Foundation is fully capable of administering this function.

Congresswoman Meek

DEEP WELL INJECTION

Question: I want to direct your attention to a growing issue in South Florida, which is how we will dispose of our treated wastewater. For the past 20 years, the EPA directed Southeastern Florida utility departments to construct and use wells dug very deep in the ground – up to 2,500 feet – to dispose of treated wastewater. I understand that this is the same treated wastewater that would be put into rivers or pumped out into the ocean in other areas of the country, but those options are apparently not possible in South Florida because of our unique geology. For the past decade, EPA has been working on a rule to govern these deep wells. And there are concerns about whether treated wastewater would contaminate or compromise freshwater quality in the Biscayne Aquifer.

Could you tell us the status of this issue today? We're running out of places to put our wastewater.

Answer: Currently, South Florida disposes of over 1.2 billion gallons per day of treated wastewater in several ways: outfalls, surface water discharge, infiltration, and deep Class I wells regulated by the State's Underground Injection Control program. Data collected from some deep monitoring wells that are located near Class I wells indicate that the injected fluids have, in some locations, migrated upward, towards overlying underground sources of drinking water.

Over the past several years, EPA has been working closely with the Florida Department of Environmental Protection to attempt to develop a revised UIC rule specific to Class I municipal wells in South Florida. A proposed rule was published in the *Federal Register* on July 7, 2000. The proposed rule would allow the continued use of injection wells in South Florida provided that underground sources of drinking water are not endangered.

In the FY 2000 Agency appropriation, Congress directed EPA to complete a "Relative Risk Assessment of Wastewater Management Options for Treated Effluent in South Florida," which we expect to make available for public comment later this year. Following public comment, EPA will complete the risk assessment and expects to use the report to guide decisions for the final rule.

LEAD POISONING: BUDGET COMMITMENT

Question: I was pleased to read this sentence in your budget justifications:

"EPA's FY 2003 lead activities will make significant contributions to virtually eliminating lead poisoning for our nation's children."

Now, I know that EPA has worked on this problem very effectively for many years, but I'm sure you would agree that the budget justification is a very optimistic statement.

I have been in touch with the Lead people at HUD, who will be coming before us next week, and they seem to be saying two things: 1) that the capacity in local communities for lead abatement, which had been building for years, is finally in place; and 2) that there is still a tremendous lead abatement problem out there that needs to be addressed.

In a lot of neighborhoods in this country, substandard Housing is our number one environmental health hazard.

Most of EPA's guiding statutes focus on outside exposures: clean air, clean water, superfund, etc. But more than a decade ago, studies found that exposures inside our homes are something like 10 times worse.

Children in the Liberty City neighborhood in Miami, where I live, suffer many times higher levels of asthma and lead poisoning than children in newer suburbs due, in large part, to the environmental health hazards in present in older housing.

I'd like to have your comments and would appreciate your detailing for us the budget commitment of EPA and your efforts to reduce lead poisoning in children.

Answer: The Agency agrees with HUD that there remains a significant lead problem in many parts of the country, and we remain committed to addressing this problem. EPA, HUD and other Federal Agencies have committed to virtually eliminate lead poisoning in this country and EPA's FY2003 activities will contribute to achieving this goal.

You are correct that many of EPA's guiding statutes focus on outside exposure to lead from air and water. However, in 1992 Congress amended the Toxic Substances Control Act to give the Agency the authority and the responsibility to address the specific problem of lead-based paint in homes. Since then, EPA's lead-based paint program has focused on two primary goals: raising the public's awareness about lead and lead hazards, and working with states and Tribes to establish a national infrastructure to identify and address those hazards.

The Agency's activities have ranged from writing a rule that requires the disclosure of lead hazards at the time of property sale or lease to the establishment of a National hotline and clearinghouse that distribute more than 1.5 million documents a year.

EPA is targeting compliance assistance, monitoring and enforcement activities to ensure compliance with Agency lead paint disclosure, certification and training, and abatement rules. In addition, we have enlisted the partnerships of the states with these efforts through the State/Tribal Assistance Grants program. Additionally, through funding from the Office of Children's Health we have established a core group of Senior Environmental Employment program inspectors to expand our existing Regional and state coverage of target housing.

Enforcing lead regulations is important to reduce exposure to lead hazards. Enforcement of the Lead Disclosure Rule has concentrated on housing with a history of lead-poisoned children, or that has physical or management problems indicating the likely presence of lead paint hazards. EPA and HUD recently announced the largest lead disclosure settlement with one of the nation's largest property management firms, Apartment Investment and Management Company (AIMCO), which will result in the assessment of lead-based paint hazards in more than 124,000 dwellings in 47 states and the District of Columbia. Furthermore, AIMCO has agreed to clean up lead-based paint hazards through HUD-approved abatement and hazard reduction methods.

Other enforcement actions the Administration has undertaken to protect the public from exposure to lead-based paint hazards include a Manchester, N.H. man and his company pleaded guilty in federal court in connection with a lead poisoning case involving the death of a two-year-old girl. The case is the first in which a corporation has been criminally prosecuted for failing to provide federal lead-based paint disclosure information to residential tenants. In October 2001, settlements were reached with three landlords in Chicago for failure to warn their tenants that their homes may contain lead- based paint hazards. The three agreed to test for and cleanup any lead-based paint found in their properties—nearly 10,000 apartments in Chicago and Cincinnati—and pay $90,000 in penalties.

EPA's national training program for lead contractors has been operating since 1998. To date EPA has authorized 38 state and Tribal programs to administer this program. In the remainder of the country, EPA has taken on that responsibility. Most recently, the Agency published final health-based standards that establish hazardous levels of lead in paint, soil and dust.

During 2003, the states, Tribes and EPA will continue to implement the Lead-based Paint Training & Certification Program in all fifty-five states and territories and in Tribal lands. EPA is also responsible for the implementation of the real estate disclosure regulation, the pre-renovation information rule and the new lead hazard standards. EPA will also work toward finalizing one major rule setting standards for training and certification for renovation and remodeling activities, and work toward proposing a rule regarding the deleading of bridges and other structures.

EPA will develop and distribute unique outreach materials and programs targeted at the most at risk populations - namely lower income families living in older (pre-1978) housing. EPA, along with HUD and CDC, will continue to support the hotline and clearinghouse operations of the National Lead Information Center.

Questions Submitted for the Record by Congressman Price

CLEAN AIR: UPDATE ON THE IMPLEMENTATION OF THE 1997 8-HOUR AND FINE PARTICULATE STANDARDS

Question: Please provide an update on the implementation of the 1997 8-hour ozone standard and the fine particulate matter standard, including the status of any related litigation and all relevant compliance dates.

Answer: In 1997, EPA significantly revised the NAAQS for PM and for ozone by adopting annual and 24-hour standards for PM2.5 (so-called "fine PM," the first time the PM NAAQS had explicitly addressed this particle size), and decreasing the ozone standard to .08 parts per million measured over eight-hour-averages (as opposed to the previous standards of 0.12 ppm measured on a one-hour basis). In May 1999, a panel of the U.S. Court of Appeals for the D.C. Circuit held that the Clean Air Act, as interpreted by EPA, effected an unconstitutional delegation of authority for lack of an intelligible principle to sufficiently cabin the agency's discretion in selecting the level of a standard. American Trucking Association v. EPA, 175 F. 3d 1027, 1034-40 (D.C. Cir. 1999). The court also held that EPA may not consider direct or indirect costs prior to establishing NAAQS (175 F. 3d at 1040-41), that EPA must consider any environmentally beneficial effects of ozone before establishing the ozone standard, and that EPA had limited statutory authority to enforce the new ozone standard. 175 F. 3d at 1051-53, 1046-51. The entire Circuit then voted 5-4 to rehear the case, one short of the number necessary to require rehearing. 195 F. 3d 4 (D.C. Cir. 1999).

Both EPA and industry petitioners sought review from the Supreme Court, which granted review, and on February 27, 2001 issued a unanimous opinion: a) upholding the constitutionality of the Clean Air Act's delegation of authority to EPA; b) affirming that costs cannot be considered in establishing NAAQS; and c) directing EPA to develop a reasonable implementation approach for implementation of the new ozone standard. Whitman v. American Trucking Association, 531 U.S. 457 (2001). The Court then remanded the preserved issues (those issues not yet ruled upon substantively by the lower court) back to the original panel of the D.C. Circuit to decide the case under the proper standard of review – whether the standards were arbitrary and capricious.

On March 26 of this year, the D. C. Circuit upheld all of the challenged standards, holding that the standards were neither arbitrary nor capricious, and that the court's earlier opinion had not determined the substantive legal validity of any of the standards. American Trucking Ass'n v. EPA, F. 3d (D.C Cir. 2002). In doing so, the court rejected challenges from industry petitioners that the PM 2.5 and 8-hour ozone standards were too stringent, and challenges from environmental petitioners that the daily PM2.5 standard was insufficiently stringent.

EPA is conducting outreach efforts with interested parties, including state and local air agencies, other governmental organizations, and individual stakeholders to exchange ideas and develop workable solutions for implementing the 8-hour ozone standard. In response to the Supreme Court's decision on implementation, we plan to propose an implementation rule this summer which

will address ways to reconcile the differing implementation provisions for ozone in the CAA (Subparts 1 and 2), including designation, classifications and attainment date and control requirement issues. We plan to issue a final rule a year after the proposal.

In addition, we are in the process of responding to the 1999 remand from the D.C. Circuit concerning the potentially beneficial effects of ozone on ultraviolet B radiation. In November 2001 we proposed to reaffirm the .08 8-hour ozone standard based on our conclusion that we cannot credibly quantify any such potentially beneficial effects and we concluded that any effects would likely be very small from a public health perspective. We are currently reviewing the public comments and expect to issue our final response later this year.

Monitoring for PM2.5 began in 1999. The PM2.5 standard requires 3 years of quality-assured Federal reference method monitoring data for purposes of air quality designations. We will have 3 years of such data available for many sites by this summer. Outreach materials are being developed to help stakeholders understand the health effects of PM2.5. As with the ozone implementation process, we are involving elected officials, the regulated community, environmentalists, and State and local control personnel in developing implementation programs.

Congressman Price

CLIMATE CHANGE INITIATIVE: BASELINE

Question: As I understand it, the Administration's Climate Change Initiative lays out a goal of reducing the "intensity" of greenhouse gas emissions – that is, the ratio of greenhouse gas emissions to economic output – by 18 percent between now and 2012. EPA's materials on this subject explain that this goal is comparable to the average progress that nations participating in the Kyoto Protocol are required to achieve.

Since the ratio of growth in emissions to growth in GDP has been decreasing for some time, what baseline is EPA using in terms of what the growth in emissions would be without the initiative? In other words, how will we be sure that the initiative will have an actual effect on growth in emissions? Would an 18 percent reduction in intensity more or less constitute the continuation of the current trend?

Answer: President Bush is committed to reducing the nation's greenhouse gas intensity by 18% from 2002 to 2012. In the absence of the President's Climate Change Initiative, the Administration forecasts the greenhouse gas intensity of the U.S. economy to fall by only roughly 14%. Thus the President's commitment is designed to reduce the greenhouse gas intensity of the U.S. economy by 4% over the next decade. This translates into an expected greenhouse gas emissions reduction of more than 100 million metric tons of carbon equivalent in 2012 -- relative to what is expected in 2012 in the absence of this goal.

The President's baseline greenhouse gas intensity estimate is derived from three primary forecasts: real GDP, energy-related carbon dioxide emissions, and other carbon dioxide and greenhouse gas emissions. The Administration's forecasts for real GDP and energy-related carbon dioxide emissions are based on the Energy Information Administration's *Annual Energy Outlook 2002*. The forecasts for other carbon dioxide and greenhouse gas emissions are based on 1999 inventories reported in EIA's *Emissions of Greenhouse Gases in the United States 1999* with future emission levels estimated using growth rates derived from reports published by EPA.

A variety of policy options and measures will be implemented to achieve the President's greenhouse gas emissions intensity reduction target. Specific policy actions that EPA is taking under the initiative, such as the recently announced Climate Leaders program, are designed to achieve real reductions from business-as-usual. The President's commitment to an 18 percent reduction in intensity is an improvement from the Administration's business-as-usual forecasts and is also an improvement from the emissions intensity reduction achieved in the 1990s.

Congressman Price

CLIMATE CHANGE INITIATIVE: COMPARISON TO KYOTO PROTOCOL NATIONS

Question: Since the Kyoto Protocol would have required the United States to reduce greenhouse gas emissions 7 percent below 1990 levels, how can it be that the goal of the Administration's initiative is comparable to the average progress in reducing emissions of Kyoto Protocol nations? Are you including the developing countries, which are not required to reduce emissions yet under the Protocol, in that calculation?

Answer: The calculation comparing the goal of the Administration's Climate Change Initiative to that of the Kyoto Parties is based on a comparison to the goals of the Kyoto Protocol as modified by the Bonn Agreement and Marrakech Accords. The resulting agreement is less stringent than originally envisioned due to the inclusion of additional sinks in Bonn and Marrakech and the absence of the United States, which would have had to undertake the largest reductions in greenhouse gas emissions had it implemented the Kyoto Agreement.

With the inclusion of more sinks and the absence of the United States, the reduction goals of the Kyoto Agreement are significantly more modest. In addition, the Russian and Eastern European economies are anticipated to have surplus credits that can be sold to countries under the Kyoto Agreement. Estimates of the greenhouse gas emissions reductions from baseline emissions forecast for the Kyoto Protocol vary widely. An Administration calculation using U.S. Energy Information Agency data suggests that the net reduction is negligible, while MIT has published an estimate for net reductions of 7.2%. With the successful implementation of the President's Initiative, the U.S. reduction in greenhouse gas emissions is about 4.5% from the Administration's forecast of baseline emissions in 2012, roughly in the middle of the range of overall estimates of reductions from all of the countries that are likely to sign the Kyoto Protocol. Developing countries are not included in the above calculations since they are not required to undertake greenhouse gas emissions reductions under the Kyoto Protocol.

Congressman Price

CLIMATE CHANGE INITIATIVE: GREENHOUSE GAS EMISSIONS

Question: Assuming the initiative reaches its goal, how much will total United States greenhouse gas emissions have increased by 2012 from 1990 levels?

Answer: Total greenhouse gas emissions are projected to increase by approximately 31 percent from 1990 levels by 2012.

Congressman Price

CLIMATE CHANGE INITIATIVE:
GROWTH OF GREENHOUSE GAS EMISSIONS

Question: I share the Administration's concerns about the effects of binding emissions targets on the economy, and I am happy to see that the Administration has now put forward a proposal, but does the Administration believe that merely slowing the growth of emissions will address the problem of climate change?

Answer: Addressing global climate change will require a sustained effort over many generations The Administration recognizes that achieving long-term stabilization of atmospheric greenhouse gas concentrations will eventually require stopping and reversing greenhouse gas emissions growth. Slowing the growth of these emissions is a serious, but measured mitigation response that will enable the development of technology to substantially reduce greenhouse gas emissions in the long term without the risk of harming the economy in the short term.

Congressman Price

CLIMATE CHANGE INITIATIVE:
INTERACTION WITH KYOTO PROTOCOL NATIONS

Question: Is the Administration continuing to interact with the Kyoto Protocol nations on the issue of climate change?

Answer: Yes. As the President reaffirmed in his speech of February 14, the United States is committed to stabilizing atmospheric greenhouse gas concentrations at a level that will prevent dangerous human interference with the climate. Because of the issue's global nature, the Administration is engaged in both multilateral and bilateral processes in which climate change is considered. For example, as a Party to the Framework Convention on Climate Change (FCCC), the U.S. participates in expert meetings on technical issues as well as meetings of FCCC official bodies. On the bilateral side, the U.S. has established formal climate change arrangements with Australia, Canada, the EU, Italy, and Japan and is exploring opportunities with other nations such as China.

The U.S. government is also engaged in bilateral cooperative activities related to climate change. For example, U.S. EPA, U.S. DOE and USAID have formed a Climate Technology Partnership to facilitate the introduction and dissemination of climate-friendly energy technologies such as wind power in participating countries. In addition, U.S. EPA has promoted the capture of methane, a powerful greenhouse gas, from coal beds and coal mines for use as energy and to improve mine safety, in a number of nations, including China, Russia, and India.

Congressman Price

CLIMATE CHANGE INITIATIVE: JOINING THE PROTOCOL

Question: Does the Administration foresee any circumstance in which the United States may need to reconsider joining the Protocol, such as the publication of more definitive scientific evidence that climate change is being caused by human beings and that it will have a substantial effect on our ecology and our way of life?

Answer: The Administration is opposed to the Kyoto Protocol because it exempts many countries from its requirements and could cause serious harm to the U.S. economy. However, America is committed to the United Nations Framework Convention and its central goal, to stabilize atmospheric greenhouse gas concentrations at a level that will prevent dangerous human interference with the climate. The Administration's immediate goal is to reduce greenhouse gases relative to the size of the U.S. economy. The President has also committed that if progress is not sufficient by 2012, the United States will respond with additional measures that may include a broad, market-based program, as well as additional incentives and voluntary measures designed to accelerate technology development and deployment.

Congressman Price

STAR FELLOWSHIP PROGRAM: ELIMINATION FROM EPA'S BUDGET

Question: Why was the decision made to eliminate the STAR fellowship program from EPA's budget request?

Answer: The President's Budget proposes to strengthen math and science education in the United States by improving the quality of math and science education in grades K-12 and by attracting the most promising U.S. students into graduate level science and engineering by providing more competitive stipends. The President's K-12 math and science initiative and the higher graduate stipends are being funded through the National Science Foundation's (NSF) budget. NSF is noted for its expertise and success in funding competitive programs in math and science. The Budget increases NSF's annual stipends for fellowship and traineeship programs from $21,500 to $25,000. Funding for EPA's STAR Fellowship Program was eliminated in FY 2003 as part of the larger initiative to strengthen math and science programs through the National Science Foundation (NSF). EPA will continue funding for its Minority Academic Institutions (MAI) Fellowships program at $1.5 million in 2003.

Congressman Price

STAR FELLOWSHIP PROGRAM: EFFECTS OF EPA ELIMINATING THE PROGRAM

Question: What effect will moving the program out of EPA have on EPA's mission of providing leadership in environmental science by facilitating the training of future environmental scientists?

Answer: Moving the STAR Fellowship program out of EPA may have some effect on EPA's ability, specifically, to facilitate the training of future environmental scientists. However, EPA will continue to maintain a strong Postdoctoral program as well as other opportunities for students, such as the Minority Academic Institutions (MAI) Fellowships program and indirect aid through the STAR Grants program, that allow future scientists to perform research in a number of environmental fields.

In addition, as mentioned previously, the President's Budget proposes to strengthen math and science education in the United States by improving the quality of math and science education in grades K-12 and by attracting the most promising U.S. students into graduate level science and engineering by providing more competitive stipends. The President's K-12 math and science initiative and the higher graduate stipends are being funded through the National Science Foundation's (NSF) budget. NSF is noted for its expertise and success in funding competitive programs in math and science.

Congressman Price

ORD FUNDING: FUNDS FOR HOMELAND SECURITY NEEDS

Question: The EPA's Office of Research and Development (ORD) supports the fundamental research that underpins the Agency's efforts to protect public health and the environment. For FY 2003, I understand the Administration proposes that 12 percent of ORD's budget, or about $70 million, will be used for homeland security needs. Again, as I understand it, half of this amount is new funding, while half would come from existing ORD programs. Does this represent a permanent cut to ORD's research budget or just a temporary diversion of funds for homeland security purposes?

Answer: The FY 2003 President's Budget request does not include $55 million in Congressional add-ons that were part of the Office of Research and Development's FY 2002 Enacted Budget. When these add-ons are excluded from the FY 2002 budget, the total FY 2003 request for ORD increases approximately $90 million over the FY 2002 Enacted. This includes $75 million for Homeland Security research.

Congressman Price

WORKFORCE RESTRUCTURING PLAN: SCIENTIFIC WORKFORCE

Question: A workforce restructuring plan focusing on ORD's mission goals and strategic plan is scheduled to be complete by May 31, 2002. Will this restructuring provide for additional training and travel monies so that EPA's scientific workforce can stay active in the scientific community at large to better serve the public in protecting public health and the environment?

Answer: The workforce restructuring plan that is scheduled to be completed by May 31, 2002 is an Agency-wide plan, not one focused solely on ORD. The restructuring plan will not provide for monetary resources, but rather, will be consistent with OMB's guidance to use workforce planning to increase span of control, reduce decision-making time, and reduce layers of government. It also will support EPA's own goals for a workforce with skills needed to achieve our mission now and in the future, by applying the most productive approaches to the most important environmental problems in the most cost-effective ways. We agree that, in order to stay at the forefront in their respective fields, EPA scientists and engineers should attend conferences, symposia, seminars, and other meetings, both to learn and to present their findings. EPA's FY 2003 President's Budget provides resources for training and travel that are commensurate with this need.

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EPA's Mission

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

EPA's Goals

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

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

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

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

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

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

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

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

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

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

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

Organization of the Annual Performance Plan and Budget

The Agency's Commitment to Link Planning and Budgeting

The Agency's approach to annual planning under the Government Performance and Results Act (GPRA) is based on a full integration of strategic planning, annual planning, budgeting, and accountability. The organization of EPA's FY 2003 Annual Plan and Budget Request reflects the Agency's continuing commitment to link planning and budgeting in a coherent, integrated process. This integrated Annual Plan and Budget promotes fiscal accountability through a direct connection between resources and outcomes.

The Annual Plan and Budget presents the Agency's Goals and Objectives, and identifies the resource levels and activities associated with them. For each Objective, the Budget sets forth a set of annual performance goals and performances measures. These goals and measures represent intermediate, measurable levels of performance needed to achieve the Agency's Objectives contained in the Agency's new five-year Strategic Plan, which was submitted to Congress in September 2000. In 2002, the Agency will begin consultations with partners and stakeholders to plan for revising EPA's Strategic Plan. The Agency will continue to work with partners and stakeholders to take into account our performance over the past years, and lay out new and innovative tools and approaches to advance our progress in environmental protection.

Annual Plan Components

All of the components of the Annual Plan are contained within the Budget. To fully explain the Agency's resource needs, the Budget contains a set of annual performance goals and performance measures broader than what will be included in the Annual Plan submission to Congress under GPRA. The Agency will submit a stand-alone Annual Plan to Congress to meet the legislative concern expressed in GPRA that "annual plans not be voluminous presentations describing performance for every activity. The annual plan and reports are to inform, not overwhelm the reader." (See the Special Analysis section of this document for the Annual Performance Plan components.)

Annual Performance Plan and Budget Organization:

Resource Tables

The resource tables provide a broad overview of the resources that the Agency is requesting for FY 2003 by Goal, Objective, and Appropriation.

Payroll Growth

EPA's payroll growth in FY 2003, including the Government-wide payroll increase of 2.6% is distributed across the goals and objectives. The explanation of change sections in each objective chapter, however, do not discretely identify goal and objecti9ve changes related to this growth. The explanation of change sections do identify any payroll changes associated with workyear changes within or across objectives.

Goal Chapters include:

- **Background and Context:** Sets the broad context for the Goal and briefly explains why the Goal is of National importance.
- **Resource Summary:** Provides a broad overview of the resources for FY 2003 by Goal, Objective, and Appropriation. (The dollar amounts in these and other tables may not add due to independent rounding.)
- **Means and Strategy:** Broadly describes the Agency's approach to achieving the strategic Goal.
- **Highlights:** Provides an overview of major activities and programs that contribute to achieving the Goal.
- **Strategic Objectives and Annual Performance Goals:** Includes all the Objectives under each Goal, and links those Objectives to FY 2003 Annual Performance Goals.
- **External Factors:** Addresses the external-Agency factors, such as participation in environmental programs by State and local governments and other stakeholders, or economic and technological factors that may enhance or impede progress toward achieving environmental goals.

Objective Sections Include:

- **Objective Statement:** Objectives are a critical part of the planning and budgeting process, and they respond to the GPRA requirement to plan achievable Objectives. Each Objective supports the attainment of a specific Goal.
- **Resource Summary:** Reports resources by Appropriation account for the Objective.

- **Key Programs:** Reports resources for Key Programs, which are core Agency programs contributing to the Objective. Resources listed under an Objective may not represent the total Key Program resources, as a Key Program may be involved in more than one Objective. The Agency has developed Key Program data so that the total Agency resources are represented in its Key Program resource tables in each Objective section.

- **FY 2003 Request:** These narratives describe specific Agency functions and the operational processes, as well as the human, capital and technological resources required to meet the performance goals.

- **FY 2003 Change from FY 2002 Enacted:** Describes major changes, by appropriation account, in programmatic funding within the Objective.

- **Annual Performance Goals:** Annual Performance Goals are central to measuring progress toward achieving Objectives. They are quantifiable standards, values, or rates against which actual achievement can be compared. They establish the connection between longer-term objectives and the day-to-day activities in the Agency's programs and will be used by managers to determine how well a program or activity is doing in accomplishing its intended results. In the Objective sections of this Annual Plan and Budget, performance information is provided for three years: FY 2001 - FY 2003. This Annual Plan and Budget contains a new section providing performance information for five years, FY 1999 - FY 2003, to fulfill the requirement to ultimately show six years of performance information.

- **Performance Measures:** Performance Measures provide the means for determining the extent to which annual goals and multi-year objectives are being achieved. As such, they are essential to program evaluations that help to guide the Agency's strategic planning. As with the Annual Performance Goals, this Annual Plan/Budget includes Performance Measure data for four years.

- **Verification and Validation of Performance Measures:** This section describes how Performance Measure data are verified and validated. It includes a description of the source of performance measure data, as well as procedures for quality assurance. It may also include information on the methodology of data collection and review.

- **Coordination with Other Agencies:** This section describes partnerships with other Federal and state agencies which are crucial to the success of EPA's environmental programs.

- **Statutory Authority:** This section cites the public law that gives the Agency legal authority to carry out the Objective.

Annual Performance Goals and Measures

This section, which is new in the FY 2003 Annual Plan and Budget, provides performance information for five years: Actual accomplishments for FY 1999 and FY 2000, the estimated performance based on the FY 2001 enacted budget, and performance estimates based on the budget requests for FY 2002 and FY 2003.

Special Analyses

This final section of the Annual Plan and Budget includes:

- **Annual Performance Plan Components:** Indicates the *Annual Plan* components of the Annual Plan and Budget.
- **User Fees:** Describes the Agency's user fee programs. User fees are the Congressionally-authorized collection of fees charged to Agency customers which cover the cost of selected permitting, testing, registration, and approval actions.
- **Customer Service Program:** Describes the Agency's plan to improve its mission of protecting public health and the environment by more efficiently and effectively serving the public, industry, state and local agencies, and other customers.
- **FY 2002 Annual Performance Gal Change Summary:** Describes Annual Performance Goals changes to reflect the Agency's FY 2002 Enacted budget.
- **Homeland Security:** Describes Agency activities related to the Administrations's Homeland Security priorities.
- **Key Programs**: Reports totals for Agency Key Programs, across Goals and Objectives. As note above, Key Program resource data now represents 100% of the Agency's budget.
- **Major Management Issues:** Describes the nature of EPA's most pressing management problems, actions taken, and progress to date in addressing the major management challenges faced by the Agency.
- **Pension and Benefits Accrual:** The President's budget proposes that Agencies pay the full pension and benefits costs for their employees. This section describes EPA's cost estimate for this proposal.
- **State and Tribal Assistance Grants:** Provides tables on STAG components, categorical grants, and statutory authorities for the STAG appropriation.

- **Working Capital Fund:** Provides information on the Working Capital Fund, a revolving fund authorized by law to finance a cycle of operations, where the costs of goods and services provided are charged to the Agency users on a fee-for-service basis.

Relationship between the Annual Plan and the Strategic Plan

The Annual Plan makes no substantive changes (not previously noted) to the Agency's Strategic Plan which was submitted to Congress in September 2000.

Relationship between Budgeted Resources and Annual Performance Goals and Measures

Annual Performance Goals are related to the resource levels contained in each Objective. Annual Performance Goals for FY 2003 in this Annual Performance Plan are based upon the resource levels in the Agency's FY 2003 budget request levels. However, resources may contribute not only to the budget year's Annual Performance Goals but also to the accomplishment of Goals in future years. For example, a performance goal to complete a number of Superfund site cleanups, or develop research methods and models, generally requires a period longer than one year. Thus, FY 2003 activities will contribute to completion of work in FY 2003 or beyond. Likewise, some FY 2003 Annual Performance Goals are achievable only with funding provided in prior years.

Given this multi-year characteristic of some of the resources requested, it is not always possible to establish direct linkages between the budget requested for a particular year and the achievement of all performance goals for that year.

Annual Plan and Budget Overview

The Environmental Protection Agency's FY 2003 Annual Plan and Budget requests $7.724 billion in discretionary budget authority and supports 17,648 Full Time Equivalents (FTE). Resources support the Agency's efforts to work with its partners toward cleaner air, purer water, and better protected land. The Agency's proposal for FY 2003 supports the Administration's commitment to setting high standards for environmental protection, while focusing on results and performance.

Strong Partnerships and Innovative Approaches

With this Annual Plan and Budget, the Administration demonstrates that strong partnerships and innovative approaches are the way to a healthier, cleaner environment. This budget provides critical environmental and health protections, with the recognition that State, local and Tribal governments often have the best solutions for their environmental challenges. Nearly forty-five percent of our proposed budget – $3.46 billion — consists of grants for states, tribes, and other EPA partners. This budget supports two innovative state grant programs: one for environmental information networks and another for state enforcement efforts. This budget also provides substantial support for the Nation's critical water infrastructure needs with $2.062 billion for the Clean Water and Drinking Water State Revolving Funds.

A Commitment to Reform and Results

The Agency is committed to the Administration's government-wide, citizen-centered reform efforts. This Annual Plan and Budget represents a strong commitment to reduce regulatory burdens and streamline Agency operations, so that the Agency's focus is on environmental results, rather than process. EPA implemented a significant management reform by restructuring its budget to match the strategic goals and objective structure of its strategic plan under the Government Performance and Results Act (GPRA). The Agency's own management reform agenda fully supports the President's goals for a government that is citizen-centered, results-oriented, and market-based. EPA is taking steps to ensure that its workforce is efficiently focused on delivering environmental results to its ultimate customer: the American people.

Implementation of the President's Management Reform Agenda is primary to the Agency's FY 2003 budget request. EPA, as well as other Federal agencies, was provided baseline scores on five government-wide initiatives, including: Human Capital, E-Government, Competitive Sourcing, Financial Performance, and Budget and Performance Integration. Although widely considered to have scored far better than other federal agencies, EPA will focus on improvements to the scores, and moving towards "green" lights in all areas. The Agency's plans for progress in these five areas are described throughout this justification.

Homeland Security

The President's FY2003 Budget requests $124 million in new funding for a total EPA investment of $133.4 million in homeland security. These investments include: $13.2 million for continued operation of the West Coast Environmental Response Team and enhancing emergency response capabilities; $5 million in grants to states to enhance homeland security coordination; $16.9 million to conduct drinking water system vulnerability assessments on small to mid-sized systems; $19 million to maintain security contracts and continue upgrades at EPA facilities as initiated by the Emergency Supplemental Appropriation Act; $75 million to conduct research on better technologies and assessments to clean up buildings contaminated and biological and chemical agents; $3.8 million for special agents who will provide environmental crimes expertise; and $0.5 million to enhance outreach on the agencies Homeland Security efforts to the public.

Cleaner Air

Under the Clean Air Act, EPA works to make the air clean and healthy to breathe by setting standards for ambient air quality, toxic air pollutant emissions, new pollution sources, and mobile sources. President Bush has directed EPA in his National Energy Policy to work with the Congress to develop legislation that would establish a flexibility market-based approach to significantly cap and reduce emissions of nitrogen oxides, sulfur dioxide, and mercury from power generation utilities. Also, as part of the implementation of the National Energy Policy, EPA will work with States, Tribes, and Local agencies to put in place new source review programs that are both fairer and more effective in provide more certainty for the regulated communities.

Certify that 2 areas of the remaining 45 nonattainment areas have attained the 1-hour NAAQS for ozone, thus increasing the number of people living in areas with healthy air quality by 1.0 million.

In FY 2003, EPA will assist States, Tribes and local governments in devising additional stationary and mobile source strategies to reduce ozone and particulate matter, and other pollutants.

The Agency also will develop strategies and rules to help States and Tribes reduce emissions and exposure to hazardous air pollutants, particularly in urban areas, and reduce harmful deposition in water bodies. A key to achieving the Clean Air Goal is $232.6 million included in this budget for air grants which go directly to States and Tribes.

Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 3% (for a cumulative reduction of 40% from the 1993 level of 6.1 million tons per year.)

Addressing Climate Change

This budget request includes $129.7 million to meet the Agency's climate change objectives by working with business and other sectors to deliver multiple benefits – from cleaner air to lower energy bills – while improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are government/ industry partnership programs designed to capitalize on the tremendous opportunities available to consumers, businesses, and organizations to make sound investments in efficient equipment and practices. These programs remove barriers in the marketplace, resulting in faster deployment of technology into the residential, commercial, transportation, and industrial sectors of the economy.

Greenhouse gas emissions will be reduced from projected levels by approximately 73.5 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%.

Purer Water

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

- Protection from Drinking Water Contaminants. The FY2003 request strengthens work with the States and Tribes to implement new health based standards to control for microbial contaminants, disinfectants and their byproducts, and other contaminants.

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

- Drinking Water State Revolving Fund. The Drinking Water State Revolving Fund (DWSRF) request of $850 million will provide substantial funding to States and Tribes to upgrade and modernize drinking water systems.

- BEACHES Grants. This budget includes $10 million for grants to states to develop monitoring and notification programs for coastal recreation waters. This funding supports the Agency's implementation of the "Beaches Environmental Assessment and Coastal Health Act of 2000."

- New Watershed Investments. The FY 2003 request includes an initiative designed to support watershed efforts. The $21 million Targeted Watershed Program recognizes

States' needs for additional support for the range of water quality restoration tools, from adequate monitoring to effective and appropriate standards, TMDL development, and to implementation of those load limits via point source permit requirements and nonpoint source controls. The Program will provide direct grants to watershed stakeholders ready to implement comprehensive restoration actions.

- Helping States Address Run-off and Restore Polluted Waters. The President's FY 2003 Budget provides significant resources to states to build on successes we have achieved in protecting the Nation's waters, by providing States and Tribes with grants to address polluted run-off, protect valuable wetlands, and restore polluted waterways.

- Clean Water State Revolving Fund. This budget request includes $1.212 billion for States and Tribes for the Clean Water State Revolving Fund (CWSRF). States receive capitalization grants, which enable them to provide low interest loans to communities to construct wastewater treatment infrastructure and fund other projects to enhance water quality. This investment allows EPA to meet the goal for the CWSRF to provide $2 billion average in annual financial assistance over the long-term even after Federal assistance ends.

> 700 projects funded by the Clean Water SRF will initiate operations, including 400 projects providing secondary treatment, advanced treatment, combined sewer overflow correction (treatment), and/or storm water treatment. Cumulatively, 8,600 CWSRF-funded projects will have initiated operations since program inception.

- Protecting Human Health along the U.S.-Mexico Border. This budget includes $75 million for water and wastewater projects along the U.S.-Mexico Border. These resources help the Agency address the serious environmental and human health problems associated with untreated and industrial and municipal sewage on the U.S.-Mexico border.

> A cumulative 900 thousand residents of the U.S.-Mexico border area will be protected from health risks because of the construction of adequate water and wastewater sanitation systems since 1994.

Better Protected Land

Cleaning Up Toxic Waste

- Keeping Superfund Working. This budget continues a commitment to clean up toxic waste sites with $1.3 billion for Superfund cleanups. The Agency will also work to maximize the participation of responsible parties in site cleanups while promoting fairness in the enforcement process. This budget will continue the dramatic progress we have made in cleaning up toxic waste sites, while protecting public health, and returning land to productive use. Through September 2001,

> EPA and its partners will complete 40 Superfund cleanups (construction completions).

cleanups have been completed at 804 sites, and over 6,500 removal actions have been taken.

- Revitalizing Local Economies and Creating Jobs Through Brownfields Cleanup and Redevelopment. The FY 2003 budget request includes $200 million for the Brownfields program, which is an increase of over $100 million above the FY 2002 request level. The additional resources will support the redevelopment and revitalization of Brownfields communities by providing funding for additional assessments at hazardous waste and petroleum contaminated properties and for state voluntary cleanup programs. The Brownfields program will continue to promote local cleanup and redevelopment of industrial sites, returning abandoned land to productive use and bringing jobs to blighted areas.

> EPA will provide additional site assessment funding to 74 new sites, and to 52 existing sites, resulting in a cumulative total of 3,350 properties assessed, the generation of 21,300 jobs, and the leveraging of $5 billion in cleanup and redevelopment funds since 1995.

Strong Science

The FY 2003 budget supports EPA's efforts to further strengthen the role of science in decision-making by using sound scientific information and analysis to help direct policy and establish priorities. The Agency will achieve maximum environmental and health protections by employing the highest quality scientific methods, models, tools, and approaches. This budget request includes $602 million to develop and apply sound science to address both current and future environmental challenges. The budget request supports a balanced research and development program designed to address Administration and Agency priorities, and meet the challenges of the Clean Air Act (CAA), the Safe Drinking Water Act (SDWA), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Food Quality Protection Act (FQPA), and other environmental statutes.

> EPA will provide industry, states, and consumers with the information on technology performance they need to make informed decisions by developing 10 testing protocols and completing 40 additional technology verifications for a cumulative Environmental Technology Verification (ETV) program total of 230.

Broad-Based and Multi-Media Approaches

Integrating Environmental Information

In FY2003, EPA will continue its grant program that provides assistance to the States and Tribes to develop and implement the Exchange Network. The grant program builds on work currently underway in several states. It assists

> The number of states using the Central Data Exchange will increase to 45 as the means by which they submit data.

States and Tribes in evaluating their readiness to participate in the Exchange Network, enhances their efforts to complete necessary changes to their information management systems to facilitate Exchange Network participation, and supports state information integration efforts. The grant program also proposes providing training and other technical assistance programs to assist States and Tribes in developing and implementing the Exchange Network.

The Central Data Exchange (CDX) is the focal point for securely receiving, translating, and forwarding data to EPA's data systems — the electronic reporting gateway to the Agency's information network. The CDX satisfies the Government Paperwork Elimination Act mandates by providing the infrastructure necessary to implement electronic signature and electronic filing of EPA required reports. In FY2003, the CDX infrastructure, a key component of the Exchange Network, will service 45 states and an assemblage of 25,000 facilities, companies, and laboratories. These facilities will use it to provide data to EPA electronically. By widely implementing an electronic reporting infrastructure, the CDX will reduce reliance on less efficient paper-based processes, thereby improving data quality, reducing reporting burden, and simplifying the reporting process.

Working with States for Effective, Sensible Enforcement

Most of the Nation's environmental laws envision a strong role for state governments in implementing and managing environmental programs. The FY 2003 request includes $15 million for the Agency to continue support to state agencies implementing authorized, delegated, or approved environmental programs through the new enforcement grant program. These funds will continue to allow states greater responsibility for enforcement of environmental laws and regulations.

EPA will improve capacity of states, localities and Tribes to conduct enforcement and compliance programs. EPA will provide training as well as assistance with state and Tribal inspections to build capacity, including implementation of the inspector credentials program for Tribal law enforcement personnel.

The FY 2003 request will continue to support the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs. The Agency will provide information and technical assistance to the regulated community through the compliance assistance program to increase its understanding of all statutory or regulatory environmental requirements, thereby reducing risk to human health and the environment and gaining measurable improvements in compliance. The program will also continue to develop strategies and compliance assistance tools that will support

EPA will maintain and improve quality and accuracy of EPA's enforcement and compliance data to identify noncompliance and focus on human health and environmental problems.

Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides.

initiatives targeted toward improving compliance in specific industrial and commercial sectors or with certain regulatory requirements.

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

The FY 2003 request includes $142.3 million to help meet the multiple challenges of the implementation of the Food Quality Protection Act (FQPA) of 1996 so that all Americans will continue to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA focuses on the registration of reduced risk pesticides to provide an alternative to the older versions on the market, and on developing and delivering information on alternative pesticides/techniques and best pest control practices to pesticide users. FQPA implements a "whole farm" approach to pollution management and will help farmers transition — without disrupting production — to safer substitutes and alternative farming practices. Expanded support for tolerance reassessments will reduce the risks to public health from older pesticides. Reassessing existing tolerances ensures food safety, especially for infants and children; and ensures that all pesticides registered for use meet the most current health standards. This budget request also supports FQPA-related science through scientific assessments of cumulative risk, including funds for validation of testing components of the Endocrine Disruptor Screening Program.

> By the end of 2003, EPA will reassess a cumulative 68% of the 9,721 pesticide tolerances required to be reassessed over ten years. This includes 75% of the 893 tolerances of special concern in protecting the health of children

SUMMARY

The EPA's FY2003 Annual Plan and Budget provides the resources and vision necessary to reach our Nation's environmental mission to protect the environment and human health. This budget represents this Administration's commitment to work with our environmental partners to develop innovative environmental programs that ensure cleaner air, purer water, and better protected land now and for generations to come.

Environmental Protection Agency
2003 Annual Performance Plan and Congressional Justification
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Environmental Protection Agency

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Appropriation Summary

Budget Authority/ Full-time Equivalencies
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Environmental Program & Management				
Budget Authority	$2,039,237 1	$2,054,511 1	$39,000 0	$2,047,703 8
Full-time equivalents (FTE)	10,948 0	11,009 2	60.0	11,144.2
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	13 8	1 5	0 0	1 5
Science & Technology				
Budget Authority	$709,132 9	$734,980.0	$90.308 0	$670,008.0
Full-time equivalents (FTE)	2,562 1	2,532.6	12 0	2,426 3
Science and Tech. – Reim				
Full-time equivalents (FTE)	0 3	5 9	0 0	3 0
Building and Facilities				
Budget Authority	$28,275 5	$25,318 0	$0 0	$42,918 0
State and Tribal Assistance Grants				
Budget Authority	$3.623,556 9	$3,733,276 0	$5,000 0	$3,463,776 0
Leaking Underground Storage Tanks				
Budget Authority	$70,699 7	$73,000 0	$0 0	$72.313 0
Full-time equivalents (FTE)	70 7	80 3	0 0	80 3
Oil Spill Response				
Budget Authority	$14,637.3	$15,000 0	$0 0	$15,581.0
Full-time equivalents (FTE)	92 9	100.0	0 0	100 0
Oil Spill Response - Reimburse				
Full-time equivalents (FTE)	13.0	0.0	0.0	0.0
FEMA REIM				
Full-time equivalents (FTE)	1 2	0.0	0 0	0 0
Inspector General				
Budget Authority	$40,784.9	$34,019 0	$0.0	$35,325.0
Full-time equivalents (FTE)	329.7	273 5	0.0	271.6
Inspector General - Reim				
Full-time equivalents (FTE)	0.1	0.0	0.0	0 0
Rereg. & Exped Proc. Rev Fund				
Full-time equivalents (FTE)	175 5	190 7	0 0	116 9
Hazardous Substance Superfund				
Budget Authority	$1,392,409 9	$1,233,109 0	$41,292.0	$1,272,888 2
Full-time equivalents (FTE)	3,146 1	3,270 3	85.0	3,321 0
Superfund Reimbursables				
Full-time equivalents (FTE)	102 1	81.3	0 0	83.5
Working Capital Fund - Reimb				
Full-time equivalents (FTE)	102 6	99 7	0 0	99 7
Subtotal, Environmental Protection Agency				
Budget Authority	$7,918,734 2	$7,903,213.1	$175,600 0	$7,620,513 0
Full-time equivalents (FTE)	17,558 1	17,645.0	157 0	17,648 0
Offsetting Receipts	$0 0	$0 0	$0 0	($4,000.0)
Pension and Benefits Accrual	$99,457.3	$103,588 6	$0 0	$107,087 8
ENVIRONMENTAL PROTECTION AGENCY (NET)				
Budget Authority	$8,018,191.5	$8,006,801.7	$175,600 0	$7,723,600 8
Full-time equivalents (FTE)	17,558 1	17,645.0	157 0	17,648 0

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Goal, Appropriation Summary

Budget Authority
Full-time
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Clean Air				
Budget Authority	$560,547 8	$593,361 8	$600 0	$597,977 3
Full-time equivalents (FTE)	1,794 8	1,830.7	0 0	1,820 0
Environmental Program & Management				
Budget Authority	$192,897 2	$190,492 6	$600 0	$190,709 2
Full-time equivalents (FTE)	1,134 6	1,169.1	0 0	1,156 8
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	0 1	0.0	0 0	0.0
Science & Technology				
Budget Authority	$149,400 1	$170,260.5	$0 0	$174,662 0
Full-time equivalents (FTE)	660.1	661.6	0 0	663 2
State and Tribal Assistance Grants				
Budget Authority	$218,250 5	$232,584.6	$0 0	$232,584 6
Hazardous Substance Superfund				
Budget Authority	$0 0	$24 1	$0 0	$21 5
Clean and Safe Water				
Budget Authority	$3,627,441 4	$3,738,990 3	$88,794.0	$3,214,674 2
Full-time equivalents (FTE)	2,628 1	2,737 3	10 0	2,742.8
Environmental Program & Management				
Budget Authority	$465,652 8	$469,734 7	$1,000 0	$407,498.9
Full-time equivalents (FTE)	2,162 3	2,254.0	0 0	2,258 9
Envir. Program & Mgmt - Reim				
Full-time equivalents (FTE)	6 2	0 0	0.0	0 0
Science & Technology				
Budget Authority	$99,774 8	$110,396 8	$82,794 0	$113,319.6
Full-time equivalents (FTE)	459 6	483.3	10 0	483.9
State and Tribal Assistance Grants				
Budget Authority	$3,062,013.8	$3,158,830.0	$5,000 0	$2,693,830.0
Hazardous Substance Superfund				
Budget Authority	$0 0	$28 8	$0 0	$25 7
Safe Food				
Budget Authority	$124,949.3	$109,071 7	$1,465 4	$109,814.6
Full-time equivalents (FTE)	817.1	777 5	2 7	770.1

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Environmental Program & Management				
Budget Authority	$96,196 5	$94,204 5	$1,465 4	$95,443 0
Full-time equivalents (FTE)	585 6	519.0	2 7	585 0
Science & Technology				
Budget Authority	$12,105 5	$14,867 2	$0 0	$14,371 6
Full-time equivalents (FTE)	56 0	67 8	0 0	68 2
Inspector General				
Budget Authority	($0 9)	$0 0	$0 0	$0 0
Reneg. & Exped Proc Rev Fund				
Budget Authority	$16 648 2	$0.0	$0 0	$0 0
Full-time equivalents (FTE)	175 5	190 7	0 0	116 9
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems				
Budget Authority	$305,072 6	$319,915 1	$1,734 6	$326,651.9
Full-time equivalents (FTE)	1,131 2	1,204 9	3.3	1,193.9
CREDIT SUBSIDY RE-ESTIMATE				
Budget Authority	$3,580 0	$0 0	$0 0	$0 0
Environmental Program & Management .				
Budget Authority	$176,951 0	$197,789 5	$1,734 6	$196.437 3
Full-time equivalents (FTE)	967 2	1,037 5	3.3	1,034.1
Envir. Program & Mgmt - Reim				
Full-time equivalents (FTE)	0 9	0.0	0 0	0 0
Science & Technology				
Budget Authority	$24,947 5	$24,754 6	$0 0	$27,843 6
Full-time equivalents (FTE)	163 1	167 4	0.0	159 8
State and Tribal Assistance Grants				
Budget Authority	$99,594.1	$97,371.0	$0 0	$102.371 0
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response				
Budget Authority	$1,685,622.1	$1,520,683.8	$42,300 0	$1.711.279 8
Full-time equivalents (FTE)	4,316 4	4,308 5	80 0	4,498 7
Environmental Program & Management				
Budget Authority	$159,121.7	$166,189 9	$3,300 0	$194,328 4
Full-time equivalents (FTE)	1,011.3	1,004 5	5 0	1,222 2
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	0 8	0 0	0.0	0.0
Science & Technology				
Budget Authority	$60,124 1	$58,043 8	$0 0	$15,480.0
Full-time equivalents (FTE)	202.5	201 8	0 0	96.7
Science and Tech. - Reim				
Full-time equivalents (FTE)	0 0	5.9	0 0	3.0
State and Tribal Assistance Grants				
Budget Authority	$72,781 2	$74,369 7	$0.0	$249,869 7

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Leaking Underground Storage Tanks				
Budget Authority	$69,762.9	$70,842 7	$0 0	$70,100.2
Full-time equivalents (FTE)	65.2	70 0	0 0	70 0
Oil Spill Response				
Budget Authority	$14,554 9	$14,501.2	$0 0	$15,075.9
Full-time equivalents (FTE)	92 9	100 0	0 0	100 0
Oil Spill Response - Reimburse				
Full-time equivalents (FTE)	13 0	0.0	0 0	0 0
FEMA REIM				
Full-time equivalents (FTE)	1.2	0 0	0.0	0 0
Superfund Reimbursables				
Budget Authority	$204.4	$0 0	$0 0	$0 0
Hazardous Substance Superfund				
Budget Authority	$1 309,072 9	$1,136,736 5	$39,000 0	$1,166,425 6
Full-time equivalents (FTE)	2.827 4	2,845 0	75 0	2,923 3
Superfund Reimbursables				
Full-time equivalents (FTE)	102 1	81.3	0 0	83 5
Reduction of Global and Cross-border Environmental Risks				
Budget Authority	$304,287 5	$276,588.0	$0 0	$269,727 2
Full-time equivalents (FTE)	549 7	517 7	0 0	504 7
Environmental Program & Management				
Budget Authority	$156,983 5	$153.061.6	$0 0	$155,878 6
Full-time equivalents (FTE)	429 4	436.9	0 0	425.9
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	1 0	0.0	0 0	0.0
Science & Technology				
Budget Authority	$48,439.9	$48,526.4	$0 0	$38,848 6
Full-time equivalents (FTE)	119.0	80.8	0.0	78 8
Science and Tech. - Reim				
Full-time equivalents (FTE)	0.3	0 0	0 0	0.0
State and Tribal Assistance Grants				
Budget Authority	$98,864.1	$75,000.0	$0 0	$75,000 0
Quality Environmental Information				
Budget Authority	$180,067.6	$197,067 8	$2,181 5	$199,124.0
Full-time equivalents (FTE)	674.0	840.1	6 0	847.1
Environmental Program & Management				
Budget Authority	$151,016 9	$153,093 0	$1,281 5	$154,022.1
Full-time equivalents (FTE)	621 1	695.2	6.0	699.6
Science & Technology				
Budget Authority	$20,028.9	$10,726.7	$0 0	$9,367.5
Full-time equivalents (FTE)	52.1	51.5	0.0	50.3
State and Tribal Assistance Grants				

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Budget Authority	$0 0	$25,000 0	$0 0	$25,000 0
Hazardous Substance Superfund				
Budget Authority	$9.021 8	$8,248 1	$900 0	$10 734 4
Full-time equivalents (FTE)	0 8	5.8	0 0	9 6
Working Capital Fund - Reimb				
Full-time equivalents (FTE)	0 0	87 6	0 0	87 6
Sound Science. Improved Understanding of Env Risk and Greater Innovation to Address Env Problems				
Budget Authority	$338 261 4	$336,066 9	$1,474 0	$327,837 9
Full-time equivalents (FTE)	1,006 4	989 6	2 0	996.3
Environmental Program & Management				
Budget Authority	$67,658.5	$64,118.7	$0.0	$67,795 7
Full-time equivalents (FTE)	234 2	248 9	0.0	248 6
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	0.1	0 0	0 0	0 0
Science & Technology				
Budget Authority	$267,842 6	$268,868 7	$1,474.0	$254,607 9
Full-time equivalents (FTE)	772 1	740.7	2 0	747.7
		0 0	0.0	0 0
Hazardous Substance Superfund				
Budget Authority	$2,760 3	$3.079 5	$0.0	$5,434 3
	0 0	0 0	0.0	0 0
A Credible Deterrent to Pollution and Greater Compliance with the Law				
Budget Authority	$393,979 3	$386,539 6	$7,010 5	$402,462 9
Full-time equivalents (FTE)	2,511 2	2,442.5	50 0	2,330 7
Environmental Program & Management				
Budget Authority	$295,304.9	$287,240 4	$5,618 5	$286,764 7
Full-time equivalents (FTE)	2,331 8	2,246.2	40 0	2,145 0
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	4 3	0.0	0.0	0 0
Science & Technology				
Budget Authority	$10,684 0	$10,948 6	$0.0	$11,269 5
Full-time equivalents (FTE)	77 6	77 7	0 0	77 7
State and Tribal Assistance Grants				
Budget Authority	$72,053 2	$70,120 7	$0 0	$85,120 7
Hazardous Substance Superfund				
Budget Authority	$15,937 2	$18,229 9	$1,392.0	$19,308 0
Full-time equivalents (FTE)	97 5	118 6	10 0	108 0
Effective Management				
Budget Authority	$445,611 9	$424,928 1	$30,040 0	$460,963 2

	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Full-time equivalents (FTE)	2,129 2	1,996 2	3 0	1,943 7
Environmental Program & Management				
Budget Authority	$277,454 1	$278,586.2	$24,000 0	$298.825 9
Full-time equivalents (FTE)	1,470 5	1,397 9	3 0	1,368 1
Envir Program & Mgmt - Reim				
Full-time equivalents (FTE)	0 4	1.5	0 0	1 5
Science & Technology				
Budget Authority	$15,785 5	$17,586 7	$6,040 0	$10,237 7
Building and Facilities				
Budget Authority	$28.275.5	$25,318 0	$0 0	$42,918 0
Leaking Underground Storage Tanks				
Budget Authority	$936 8	$2.157 3	$0 0	$2,212 8
Full-time equivalents (FTE)	5 5	10 3	0 0	10.3
Oil Spill Response				
Budget Authority	$82 4	$498 8	$0 0	$505 1
Inspector General				
Budget Authority	$40,785 8	$34.019 0	$0 0	$35,325 0
Full-time equivalents (FTE)	329 7	273 5	0 0	271 6
Inspector General - Reim				
Full-time equivalents (FTE)	0.1	0.0	0 0	0 0
Rereg & Exped Proc Rev Fund				
Budget Authority	$1,890 0	$0.0	$0 0	$0 0
Hazardous Substance Superfund				
Budget Authority	$55,413 3	$66,762 1	$0 0	$70,938.7
Full-time equivalents (FTE)	220.4	300 9	0 0	280.1
Working Capital Fund - Reimb				
Full-time equivalents (FTE)	102.6	12 1	0.0	12 1
ALLOCATION ACCT				
Budget Authority	$24,988 5	$0.0	$0.0	$0.0
Subtotal, Environmental Protection Agency				
Budget Authority	$7,918,734 2	$7,903,213.1	$175,600 0	$7,620,513 0
Full-time equivalents (FTE)	17,558 1	17,645 0	157.0	17,648 0
Offsetting Receipts	$0.0	$0 0	$0 0	($4,000 9)
Pension and Benefits Accrual	$99,457 3	$103,588 6	$0 0	$107,087.8
ENVIRONMENTAL PROTECTION AGENCY (NET)				
Budget Authority	$8,018,191.5	$8,006,801 7	$175,600.0	$7,723,600 8
Full-time equivalents (FTE)	17,558 1	17,645 0	157.0	17,648.0

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Goal, Objective Summary

Budget Authority
Full-time
(Dollars in Thousands)

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Clean Air				
Budget Authority	$560,547 8	$593,361 8	$600 0	$597,977.3
Full-time equivalents (FTE)	1,794.8	1,830 7	$0 0	1,820 0
Attain NAAQS				
Budget Authority	$441,056 4	$457,711 8	$600 0	$458,856 3
Full-time equivalents (FTE)	1,330 5	1,363 0	0.0	1,357 1
Reduce Air Toxics Risk				
Budget Authority	$101,548 2	$114,658 9	$0 0	$118,023 2
Full-time equivalents (FTE)	377.7	375 2	0 0	371.4
Reduce Acid Rain				
Budget Authority	$17,943 2	$20,991 1	$0 0	$21,097 8
Full-time equivalents (FTE)	86 6	92 5	0 0	91 5
Clean and Safe Water				
Budget Authority	$3,627,441 4	$3,738,990.3	$88,794 0	$3,214,674 2
Full-time equivalents (FTE)	2,628 1	2,737 3	10.0	2,742 8
Safe Drinking Water, Fish and Recreational Waters				
Budget Authority	$1,171,900.7	$1,268,497.1	$87,749 0	$1,148,425 1
Full-time equivalents (FTE)	835 2	887 6	10 0	887 4
Protect Watersheds and Aquatic Communities				
Budget Authority	$448,020 6	$463,061 1	$0 0	$435,814 7
Full-time equivalents (FTE)	959 7	980 2	0.0	988 8
Reduce Loadings and Air Deposition				
Budget Authority	$2,007,520 1	$2,007,432 1	$1,000 0	$1,630,434 4
Full-time equivalents (FTE)	833 2	869 5	0.0	866.6

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Safe Food				
Budget Authority	$124,949 3	$109 071 7	$1,465 4	$109,814 6
Full-time equivalents (FTE)	817 1	777 5	2 7	770 1
Reduce Risks from Pesticide Residues in Food				
Budget Authority	$44,288 8	$47,007 0	$602 6	$45,290 4
Full-time equivalents (FTE)	318 5	335 6	1 4	331 1
Eliminate Use on Food of Pesticides Not Meeting Standards				
Budget Authority	$80,660.5	$62,064 7	$862 8	$64,524 2
Full-time equivalents (FTE)	498 6	441 9	1 3	439 0
Preventing Pollution and Reducing Risk in Communities, Homes Workplaces and Ecosystems				
Budget Authority	$305.072 6	$319,915 1	$1,734 6	$326,651 9
Full-time equivalents (FTE)	1,131.2	1,204.9	3.3	1,193 9
Reduce Public and Ecosystem Risk from Pesticides				
Budget Authority	$54,262 3	$55,543 9	$482 4	$55,409 8
Full-time equivalents (FTE)	227 0	239.9	2 0	239 1
Reduce Risks from Lead and Other Toxic Chemicals				
Budget Authority	$33,927 9	$36,273.5	$150 0	$36,355 9
Full-time equivalents (FTE)	139.3	144 2	0 0	144 7
Manage New Chemical Introduction and Screen Existing Chemicals for Risk				
Budget Authority	$69,315 0	$74,235 6	$1,102 2	$77,538 2
Full-time equivalents (FTE)	379 6	399.0	1 3	391.2
Ensure Healthier Indoor Air				
Budget Authority	$39,190 4	$39,670 1	$0 0	$40,322 7
Full-time equivalents (FTE)	116.4	134 0	0.0	132 2
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals				
Budget Authority	$41,723 8	$48,755 4	$0 0	$46,115 9
Full-time equivalents (FTE)	183 3	197 0	0 0	196.0
Assess Conditions in Indian Country				
Budget Authority	$66,653 2	$65,436 6	$0 0	$70,909.4
Full-time equivalents (FTE)	85.6	90 8	0 0	90.7

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response				
Budget Authority	$1,685,622 1	$1,520,683.8	$42,300 0	$1,711,279.8
Full-time equivalents (FTE)	4,316 4	4,308.5	80.0	4,498.7
Control Risks from Contaminated Sites and Respond to Emergencies				
Budget Authority	$1,524,914 9	$1,354,840.9	$42,300 0	$1,544,018.6
Full-time equivalents (FTE)	3,556 1	3,500 7	0 0	3,698 3
Regulate Facilities to Prevent Releases				
Budget Authority	$160,707.2	$165,842 9	$0.0	$167,261.2
Full-time equivalents (FTE)	760 3	807.8	0.0	800.4
Reduction of Global and Cross-border Environmental Risks				
Budget Authority	$304,287 5	$276,588.0	$0 0	$269,727.2
Full-time equivalents (FTE)	549 7	517 7	0.0	504.7
Reduce Transboundary Threats to Human and Ecosystem Health in North America				
Budget Authority	$120,000.8	$96,869.4	$0.0	$98,185.9
Full-time equivalents (FTE)	82.9	83 5	0.0	80.8
Reduce Greenhouse Gas Emissions.				
Budget Authority	$149,610 2	$145,293 6	$0.0	$136,953.4
Full-time equivalents (FTE)	347.1	317.3	0.0	303.9
Reduce Stratospheric Ozone Depletion.				
Budget Authority	$18,989 4	$15,843.2	$0.0	$15,813.3
Full-time equivalents (FTE)	34.8	30 1	0.0	29.7
Protect Public Health and Ecosystems from PBTs and other Toxics				
Budget Authority	$4,772.6	$6,060.9	$0.0	$6,173.6
Full-time equivalents (FTE)	31.0	32 8	0.0	35.6
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies.				
Budget Authority	$10,914 5	$12,520 9	$0.0	$12,601.0
Full-time equivalents (FTE)	53.9	54.0	0.0	54 7
Quality Environmental Information				
Budget Authority	$180,067.6	$197,067.8	$2,181.5	$199,124.0

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Full-time equivalents (FTE)	674 0	840 1	6.0	847 1
Increase Availability of Quality Health and Environmental Information				
Budget Authority	$80,122 2	$121,920 2	$0 0	$120,414 7
Full-time equivalents (FTE)	462 1	478 2	0 0	492 1
Provide Access to Tools for Using Environmental Information				
Budget Authority	$83,127 7	$53,261 9	$253.1	$48.181 3
Full-time equivalents (FTE)	210 8	180 5	3.0	169 7
Improve Agency Information Infrastructure and Security				
Budget Authority	$16,817 7	$21,885 7	$1,928 4	$30,528 0
Full-time equivalents (FTE)	1 1	181 4	3.0	185.3
Sound Science, Improved Understanding of Env Risk and Greater Innovation to Address Env Problems				
Budget Authority	$338,261.4	$336,066 9	$1,474 0	$327,837 9
Full-time equivalents (FTE)	1,006.4	989 6	2 0	996.3
Conduct Research for Ecosystem Assessment and Restoration				
Budget Authority	$134,525 5	$120,594 7	$0 0	$119,114.6
Full-time equivalents (FTE)	349 0	352 6	0 0	350 9
Improve Scientific Basis to Manage Environmental Hazards and Exposures				
Budget Authority	$52 407 6	$53,021 7	$0.0	$56,355.0
Full-time equivalents (FTE)	163 4	175 8	0.0	176.0
Enhance Capabilities to Respond to Future Environmental Developments				
Budget Authority	$48,626 6	$62,808.9	$1,440 6	$50,965 8
Full-time equivalents (FTE)	159.6	150.6	2 0	152 6
Improve Environmental Systems Management				
Budget Authority	$59,130 3	$57,723 6	$33 4	$52,274 1
Full-time equivalents (FTE)	164 5	148 2	0 0	146 6
Quantify Environmental Results of Partnership Approaches				
Budget Authority	$9,539 9	$8,672 7	$0 0	$9,058.4
Full-time equivalents (FTE)	16 1	16 7	0 0	18 0
Incorporate Innovative Approaches				
Budget Authority	$24,887.3	$23,324 5	$0.0	$29,787 9

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Full-time equivalents (FTE)	127 1	120 2	0 0	126 7
Demonstrate Regional Capability to Assist Environmental Decision Making				
Budget Authority	$6,417.2	$6,677 9	$0 0	$6,591.8
Full-time equivalents (FTE)	3.9	3.0	0 0	3 0
Conduct Peer Review to Improve Agency Decisions				
Budget Authority	$2,727.0	$3,242 9	$0 0	$3,690.3
Full-time equivalents (FTE)	22 8	22 5	0 0	22 5
A Credible Deterrent to Pollution and Greater Compliance with the Law				
Budget Authority	$393,979 3	$386,539 6	$7,010 5	$402,462 9
Full-time equivalents (FTE)	2,511 2	2,442 5	50 0	2,330 7
Increase Compliance Through Enforcement				
Budget Authority	$337,582 6	$330,771 1	$7,010 5	$346,590 5
Full-time equivalents (FTE)	2,092.2	2,025 9	50 0	1,932.6
Promote Compliance Through Incentives and Assistance.				
Budget Authority	$56,396 7	$55,768 5	$0 0	$55,872 4
Full-time equivalents (FTE)	419 0	416 6	0 0	398 1
Effective Management				
Budget Authority	$445,611.9	$424,928.1	$30,040.0	$460,963 2
Full-time equivalents (FTE)	2,129 2	1,996 2	3 0	1,943 7
Provide Leadership				
Budget Authority	$40,847.0	$47,207.9	$0 0	$49,767 0
Full-time equivalents (FTE)	283.2	306.8	0 0	311.4
Manage for Results Through Services, Policies, and Operations				
Budget Authority	$178,771 0	$186,431 5	$0 0	$201,462.0
Full-time equivalents (FTE)	1,492 2	1,294 0	0.0	1,244 6
Provide Quality Work Environment.				
Budget Authority	$177,971 0	$139,327.3	$30,040.0	$156,141 5
Full-time equivalents (FTE)	177	21.3	3 0	15 4
Provide Audit, Evaluation, and Investigative Products and Services				
Budget Authority	$48,022 9	$51,961.4	$0 0	$53,592 7

	FY 2001 Actuals	FY 2001 Enacted	FY 2002 Homeland Security	FY 2001 Request
Full-time equivalents (FTE)	336 1	374.1	0 0	372 3
Subtotal, Environmental Protection Agency				
Budget Authority	$7,918,734 2	$7,903,213.1	$175,600 0	$7,620,513 0
Full-time equivalents (FTE)	17,558 1	17,645.0	157.0	17,648 0
Offsetting Receipts	$0 0	$0.0	$0.0	($4,000 0)
Pension and Benefits Accrual	$99,457.3	$103,588 6	$0 0	$107,087 8
ENVIRONMENTAL PROTECTION AGENCY (NET)				
Budget Authority	$8,018,191 5	$8,006,801.7	$175,600 0	$7,723,600.8
Full-time equivalents (FTE)	17,558.1	17,645 0	157 0	17,648 0

APPROPRIATIONS SUMMARY
ENVIRONMENTAL PROTECTION AGENCY
(DOLLARS IN THOUSANDS)

Appropriation Account	FY 2001 Actuals	FY 2002 Enacted	FY 2002 Homeland Security	FY 2003 Request
Science and Technology	$709,132.9	$698,089.0	$90,308.0	$670,008.0
Environmental Programs and Management	$2,039,237.1	$2,054,511.1	$39,000.0	$2,047,703.8
Office of Inspector General	$40,784.9	$34,019.0	$0.0	$35,325.0
Buildings and Facilities	$28,275.5	$25,318.0	$0.0	$42,918.0
Oil Spills Response	$14,637.3	$15,000.0	$0.0	$15,581.0
Superfund	$1,392,409.9	$1,270,000.0	$41,292.0	$1,272,888.2
Leaking Underground Storage Tanks	$70,699.7	$73,000.0	$0.0	$72,313.0
State and Tribal Assistance Grants:	$3,623,556.9	$3,733,276.0	$5,000.0	$3,463,776.0
Subtotal, EPA	$7,918,734.2	$7,903,213.1	$175,600.0	$7,620,513.0
Offsetting Receipts	$0.0	$0.0	$0.0	($4,000.0)
Pension and Benenfits Accrual	$99,457.3	$103,588.6	$0.0	$107,087.8
Total EPA	**$8,018,191.5**	**$8,006,801.7**	**$175,600.0**	**$7,723,600.8**

Environmental Protection Agency
2003 Annual Performance Plan and Congressional Justification
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Environmental Protection Agency

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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 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Clean Air	**$560,547.8**	**$593,961.8**	**$597,977.3**	**$4,015.5**
Attain NAAQS	$441,056.4	$458,311.8	$458,856.3	$544.5
Reduce Air Toxics Risk	$101,548.2	$114,658.9	$118,023.2	$3,364.3
Reduce Acid Rain.	$17,943.2	$20,991.1	$21,097.8	$106.7
Total Workyears	1,794.8	1,830.7	1,820.0	-10.7

Background and Context

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

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

The air pollution problem is national and international in scope. Air pollution regularly crosses local and state lines and, in some cases, crosses our borders with Canada and Mexico. This causes problems not only for the majority of the population who live in expanding urban areas, but also for less populated areas and national parks. Federal assistance and leadership are essential for developing and implementing cooperative state, local, Tribal, regional, and international programs to prevent and control air pollution; for ensuring that national standards are met; and for providing tools for states, Tribes, and local communities to use in preparing their clean air plans.

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

- Ground-level ozone (smog). Ozone can irritate and inflame airways. Health effects attributed to exposures to ozone, generally while individuals are engaged in moderate or heavy exertion, include significant decreases in lung function and increased respiratory symptoms such as chest pain and cough. Exposures to ozone result in lung inflammation, aggravate respiratory diseases such as asthma and may make people more susceptible to respiratory infection. Children active outdoors are most at risk of experiencing such effects. Other at-risk groups include adults who are active outdoors such as outdoor workers and individuals with respiratory disorders such as asthma. Ground-level ozone interferes with the ability of plants to produce and store food, which reduces crop and forest yields by making plants more susceptible to disease, insects, other pollutants and harsh weather. It damages the leaves of trees and other plants, affecting the appearance of cities, national parks and recreation areas.

- Sulfur dioxide (SO_2). Peak levels of SO_2 can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposure to a combination of SO_2 and fine particles can cause respiratory illness, alter the defense mechanisms of lungs, and aggravate cardiopulmonary disease. People who may be most susceptible to these effects include individuals with cardiovascular disease or chronic lung disease, as well as children and the elderly. SO_2 is also a major contributor to acidic deposition.

- Nitrogen dioxide (NO_2). Exposure to NO_2 causes respiratory symptoms such as coughing, wheezing, and shortness of breath in children and adults with respiratory diseases, such as asthma. Even short exposures to NO_2 affect lung function. NO_2 also contributes to acidic deposition, eutrophication in coastal waters, and visibility problems.

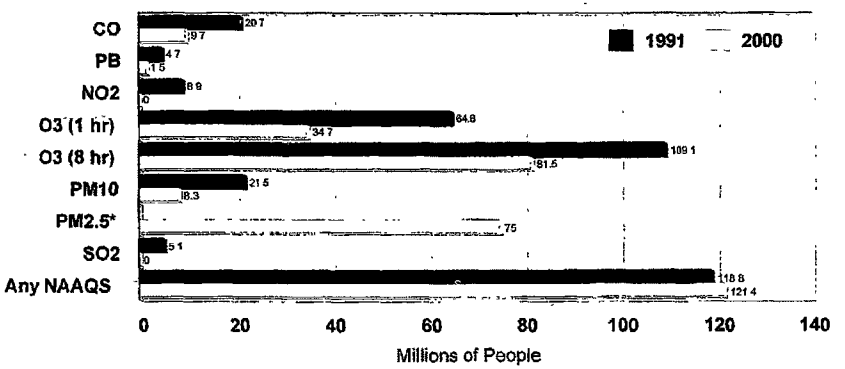
- Carbon monoxide (CO). The health threat from lower levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise. Even healthy people can be affected by high levels of CO. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks.

- Lead. Lead causes damage to the kidneys, liver, brain and nerves, and other organs. Excessive exposure to lead causes seizures, mental retardation, behavioral disorders, memory problems, and mood changes. Low levels of lead damage the brain and nerves in fetuses and young children, resulting in learning deficits and lowered IQ.

- Particulate matter (PM). PM causes a wide variety of health and environmental problems. When exposed to PM, people with existing lung or heart diseases - such as asthma, chronic obstructive pulmonary disease, congestive heart disease, or coronary

artery disease - are at increased risk of health problems requiring hospitalization or of premature death. When exposed to PM, children and people with existing lung disease may not be able to breathe as deeply or vigorously as they normally would and they may experience symptoms such as coughing and shortness of breath. PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis, causing more use of medication and more doctor visits. PM is also the major cause of reduced visibility in parts of the U.S., including many of our national parks. Particles can be carried over long distances by wind and then settle on ground or water. The effects of this settling include: making lakes and streams acidic, changing the nutrient balance in coastal waters and large river basins, depleting the nutrients in soil, damaging sensitive forests and farm crops, and decreasing the diversity of ecosystems.

Populations of Counties with Air Quality Concentrations Above the NAAQS Level



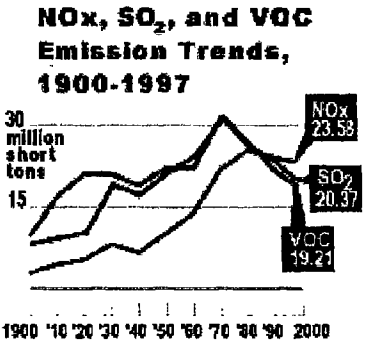
Hazardous air pollutants. Hazardous air pollutants (HAPs), commonly referred to as air toxics, are pollutants that are known or suspected to cause cancer or other serious health problems, such as reproductive effects or birth defects, or adverse environmental effects. EPA is working with state, local, and Tribal governments to reduce air releases of 188 pollutants listed in the Clean Air Act Amendments of 1990. Examples of air toxics include mercury and BTX. HAPs are emitted from literally thousands of sources. Adverse effects to human health and the environment due to HAPs can result from even low level exposure to air toxics from individual facilities, exposures to mixtures of pollutants found in urban settings, or exposure to pollutants emitted from distant sources that are transported through the atmosphere over regional, national, or even global airsheds.

Compared to information for the criteria pollutants, the information about the ambient concentrations of HAPs and their potential health effects is relatively incomplete. Most of the information on the potential health effects of these pollutants is derived from experimental animal data. Of the 188 HAPs, almost 60 percent are classified by the Clean Air Act (section 112.(f)(2)(A)) as known, probable, or possible carcinogens. One of the often documented ecological concerns associated with toxic air pollutants is the potential for some to damage aquatic ecosystems. Deposited air pollutants can be significant contributors to overall pollutant loadings entering water bodies.

Acid rain. Emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x) react in the atmosphere and fall to earth as acid rain, causing acidification of lakes and streams and contributing to the damage of trees at high elevations. Acid deposition also accelerates the decay of building materials and paints and contributes to degradation of irreplaceable cultural objects, such as statues and sculptures. NO_x deposition also contributes to eutrophication of coastal waters, such as the Chesapeake Bay and Tampa Bay. Before falling to earth, SO_2 and NO_x gases form fine particles that 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.

Trends. The air in the U.S. is now the cleanest it has been during the 20 years that EPA has been tracking air quality. National air quality, measured at thousands of monitoring stations across the country, has shown improvements for all six principal pollutants: CO, lead, NO_2, SO_2, ozone, and PM. This means that during the past 20 years, Americans have been able to breathe a little easier, see a little better, and enjoy a cleaner environment. Additional steps still need to be taken, however, to bring remaining areas with unhealthful air fully into compliance with health-based air quality standards. The nation also faces a significant challenge in maintaining this historical trend of improving air quality, given expectations for future growth in the economy, the population, and highway vehicle use. In addition, ambient concentrations of many hazardous air pollutants remain high and continue to impose significant health risks on exposed individuals.

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



Nationwide, emissions of air toxics dropped approximately 30 percent between 1990 and 2000. For example, perchloroethylene monitored in 16 urban sites in California showed a drop of 60 percent from 1989 to 1998. Benzene, emitted from cars, trucks, oil refineries, and chemical processes, is another widely monitored toxic air pollutant. Measures taken from 84 urban monitoring sites around the country show a 39-percent drop in benzene levels from 1993 to 1998. Since implementation of EPA's acid rain program in 1995, there have been dramatic reductions (10 to 25 percent) in sulfates deposited in many of the most acid sensitive ecosystems located in the Northeastern U.S.

Although substantial progress has been made, it is important not to lose sight of the magnitude of the air pollution problem that still remains. Despite great progress in improving air quality, over 160 million tons of air pollution were released into the air in 2000 in the U.S. Approximately 121 million people lived in counties where monitored air was unhealthy because of high levels of the six principal air pollutants. Some national parks, including the Great Smoky Mountains and the Shenandoah, have high air pollution concentrations resulting from the transport of pollutants many miles from their original sources. In 2000, for the third consecutive year, rural 1-hour ozone (smog) levels were greater than the average levels observed for urban sites, but they are still lower than levels observed at suburban sites.

Means and Strategy

Strategy. EPA's overall goals for the air quality program include: improving air quality and addressing highest health and environmental risks, while reducing program costs; getting better results in less burdensome ways; and increasing the roles of state Tribal, and local governments. The Clean Air Act provides the principal framework for national, state, Tribal, and local efforts to protect and improve air quality and reduce risks. Under the Clean Air Act, EPA has a number of responsibilities:

- Ensuring continued protection of public health and the environment through regular review of National Ambient Air Quality Standards (NAAQSs) for the six criteria pollutants and revision of the NAAQSs, if necessary, based on the latest scientific information available.

- Ensuring that the NAAQSs are met by developing and carrying out national regulatory and non-regulatory programs that reduce air pollution from vehicles, factories, and other sources, and by working in partnership with state, Tribal, and local governments on implementing their clean air programs.

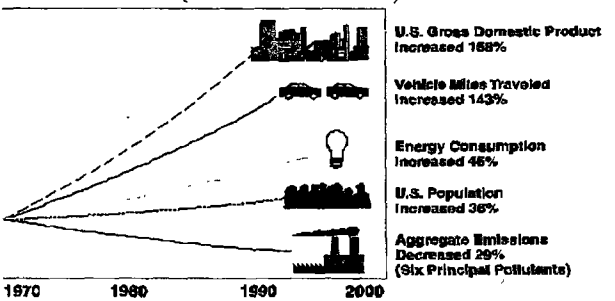
- Assessing public health risks from air toxics and reducing public exposure to pollutants that cause or may cause cancer and other adverse human health effects through pollution prevention and reduction of toxic emissions.

- Reducing acid rain through a market-based approach that provides flexibility to electric utilities and other large sources of SO_2 and NO_x in how they meet emission reduction requirements.

- Protecting and enhancing visibility across large regional areas, including many of the Nation's most treasured parks and wilderness areas, by reducing pollutants such as PM, SO_2, and NO_x.

- Providing a strong scientific basis for policy and regulatory decisions and exploring emerging problem areas through a coordinated, comprehensive research program.

Comparison of Growth Areas and Emission Trends (Between 1970 and 2000)



Between 1970 and 2000, gross domestic product increased 158 percent, energy consumption increased 45 percent, vehicle miles traveled increased 143 percent, and U.S population increased 36 percent At the same time, total emissions of the six principal air pollutants decreased 29 percent

One constant across the titles of the Clean Air Act is that they all are designed to get the most cost-effective pollution reductions early on. The problems that remain are some of the most difficult to solve. EPA has developed strategies to help address this difficult increment and overcome the barriers that have hindered progress towards clean air in the past. The Agency will use flexible approaches, where possible, instead of hard-and-fast formulas or specific technology requirements. Also, the Agency will work with areas that have the worst problems to develop strategies that address unique local conditions and achieve real risk reductions that matter to communities.

- Multi-pollutant strategies. The many inter-relationships among ozone, fine PM, regional haze, and air toxics problems provide opportunities for developing integrated strategies to reduce pollutant emissions. EPA has encouraged states, Tribes, and local governments to coordinate the work they are doing to maximize the effectiveness of control strategies.

- Economic incentives. EPA has provided increased flexibility to industry through the use of economic incentives and market-based approaches. Emissions trading, averaging, and banking have become standard tools in the Agency's air programs. The acid rain program uses allowance trading and early reduction credits to cut control costs and reduce pollution faster. The Tier II and diesel programs allow manufacturers to produce a mix of vehicles that collectively meet emission reduction targets. EPA's economic incentive programs include a variety of measures designed to increase flexibility and

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

- Consensus building. In implementing the Clean Air Act, the Agency has emphasized consensus building, and broad stakeholder involvement. Examples include:
  - Working cooperatively with industry on toxics standards (e.g., the regulatory-negotiation with the coke oven industry).
  - Working with industry to implement innovative approaches (e.g., the auto industry voluntarily agreeing to meet National Low Emission Vehicle standards).
  - Meeting with the refining industry, the auto industry, and state officials to balance the many concerns in the Tier II rulemaking and promulgating a complicated and groundbreaking national program supported by a wide range of stakeholders.

- Systems approach. Tier II also is a good example of how the Agency looks at air quality problems from a broader perspective and takes advantage of the potential synergies. As catalyst technology requires low-sulfur fuel, the Agency is regulating fuels and vehicles as one system, to give pollution control manufacturers the incentive to develop even cleaner technologies. This results in a greater reduction in pollution -- at less cost -- than by addressing fuels and vehicles separately.

- Innovative technology. EPA increasingly incorporates incentives and performance-based approaches into regulations to spur new technologies that will help meet ambitious goals more cost-effectively (sometimes at even less cost than EPA has predicted). The Agency also is building partnerships that help develop and deploy these new technologies. The report prepared to meet the requirements of section 812 of the Clean Air Act includes a list of the technologies that have been developed since the 1990 Amendments. The advances have been remarkable. Technologies like SCR on power plants, ultra-low NO_x burners, or advanced catalysts now have entered the mainstream, at far less cost than anyone predicted.

Research

EPA's NAAQS-related research supports the Agency's Clean Air Goal to meet national clean air standards for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NO_X), lead, tropospheric ozone, and particulate matter (PM). This research provides methods, models, data, and assessment criteria on the health risks associated with these and other pollutants, alone and in combination, focusing on the exposures, health effects, mechanisms of injury, and identifying components of particulate matter (PM). In addition, this research provides NAAQS implementation tools to support efforts by industry, and state, Tribal, and local regulators, to develop and improve State Implementation Plans (SIPs) to attain the NAAQS.

Research on air toxics investigates the root causes of the environmental and human health problems in urban areas related to these pollutants. These efforts provide the necessary health effects data, measurements, methods, models, information, assessments, and technical support to EPA, state, Tribal, and local regulators to estimate human health effects and aggregate exposures to hazardous air pollutants. Research also supports atmospheric and emission modeling in order

to estimate fate, ambient concentrations, and mobile source emissions of air toxics at a more refined scale. With this information the Agency will be in a better position to determine risk and develop alternative strategies for maximizing risk reductions.

Strategic Objectives and FY 2003 Annual Performance Goals

Attain NAAQS

- Maintain healthy air quality for 44.1 million people living in monitored areas attaining the ozone standard; certify that 2 areas of the remaining 45 nonattainment areas have attained the 1-hour NAAQS for ozone thus increasing the number of people living in areas with healthy air by 1.0 million.

- Maintain healthy air quality for 7.2 million people living in monitored areas attaining the PM standards; increase by 81 thousand the number of people living in areas with healthy air quality that have newly attained the standard.

- Maintain healthy air quality for 52.7 million people living in monitored areas attaining the CO, SO2, NO2, and Lead standards; increase by 4.1 million the number of people living in areas with healthy air quality that have newly attained the standard.

Reduce Air Toxics Risk

- Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 3% of the updated 1993 baseline of 6.1 million tons (for a cumulative reduction of 40% from the 1993 level of 6.1 million tons per year.)

Reduce Acid Rain

- Maintain or increase annual SO2 emission reduction of approximately 5 million tons from the 1980 baseline. Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO2 emissions cap for utilities.

- 2 million tons of NOx from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.

Highlights

Continue progress toward NAAQSs attainment. For FY 2003, EPA will implement the President's National Energy Policy; continue the regular reviews of the NAAQSs; carry out programs to meet NAAQSs and regional haze requirements; and continue the research, air quality monitoring, and laboratory analyses that provide the scientific and technical bases for the NAAQS program.

- Multi-pollutant legislation. President Bush has directed EPA in his National Energy Policy to work with the Congress to develop legislation that would establish a flexible, market-based approach to significantly cap and reduce emissions of NO_x, SO_2, and mercury from the power generation sector. The legislation would build on the successful acid rain program and on the NO_x allowance trading program for the Northeast. Reducing emissions of NO_x and SO_2 will reduce levels of ground-level ozone and PM, as well as acid deposition.

- New Source Review reform. Also as part of the implementation of the National Energy Policy, EPA will work with states, Tribes and local agencies to put in place revised New Source Review programs. EPA is working with stakeholders to explore options that are both fairer and more effective and provide more certainty for the regulated communities.

- Review of NAAQS. By the end of FY 2002, EPA will make available to the public a comprehensive assessment of recent scientific findings on the health and environmental risks associated with PM. Following completion of this assessment and a staff paper that evaluates the policy implications of the scientific findings, EPA will propose a decision on whether to retain or revise the PM NAAQS. This proposal is scheduled for late FY 2003 or early FY 2004.

- Implementation of existing NAAQSs. On the national level, EPA will work with states, Tribes, and local governments on developing and implementing measures to meet clean air standards. The Agency will continue technical support for implementing the 1-hour ozone NAAQS. EPA also will support states and Tribes in developing innovative, voluntary programs that will help to achieve early reductions in the transition to the 8-hour ozone standard. The Agency also will develop a strategy and guidance for transition from the PM-10 standard to a fine particulate standard. We will work to promote and expand the use of voluntary, and smart growth and other innovative approaches to provide emission reductions.

- Public information. EPA and states will expand outreach efforts to promote public awareness of the Air Quality Index.

- Vehicle, engine, and fuels standards. EPA will establish and implement Federal standards to require cleaner motor vehicles, fuels, and non-road equipment that are cost-effective and technically feasible. The Agency will continue implementation of the Tier II and gasoline sulfur standards. The Agency also will continue work on the 2007 heavy-duty highway engine and diesel sulfur requirements. In addition, EPA will develop a proposed rule establishing new standards for heavy-duty, non-road, land-based diesel engines and vehicles.

- Testing for compliance. EPA will continue research, monitoring and laboratory analysis of industry compliance to national air quality standards. By 2003, a dramatic change in the type and amount of testing will be required at EPA's National Vehicle and Emissions Laboratory (NVFEL) to ensure meeting the goals of the Tier II and Heavy Duty Engine regulations, as well as to proceed with advancements in vehicle emission control

technologies. To meet this challenge, EPA will require an investment for essential emission measurement system upgrades at the NVFEL in order to (1) fully implement and enforce the new Tier II emission standards and test procedures for all passenger cars and light trucks beginning with the FY 2004 model year; (2) implement and enforce the model years 2004 and 2007 Diesel Engine Standards for all on-highway heavy-duty engines; and (3) develop digital and computer-based emission measurement system upgrades required to accurately measure the next generation of emission control systems.

Reduce public exposure to air toxics. In FY 2003, EPA will develop strategies and rules to help states and Tribes reduce emissions and exposure to hazardous air pollutants, particularly in urban areas, and reduce harmful deposition in water bodies. The Agency also will target source characterization work, especially development and improvement of emissions information, that is essential for the states, Tribes, and local agencies to develop strategies to meet the standards. EPA will look closely at urban areas to determine the various sources of toxics that enter the air, water, and soil, and determine the best manner to reduce the total toxics risk in these urban areas. Some specific activities and initiatives in this program for FY 2003 include:

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

- Air toxics rules. EPA will continue the extensive residual risk analyses for already promulgated Maximum Achievable Control Technology (MACT) standards to determine if additional standards are necessary to reduce the remaining risks from these sources.

- Mobile sources air toxics. In FY 2001, EPA issued a rule to address emissions of air toxics from mobile sources. In the rule, the Agency identified 21 mobile source air toxics and established new gasoline toxic emission performance standards. The rule established a Technical Analysis Plan to conduct research and analysis on mobile source air toxics. Based on the results of that research, EPA will consider future rulemaking in 2004 in which EPA will revisit the feasibility and need for additional controls for non-road and highway engines and vehicles and their fuels. To prepare for this review, in FY 2003, EPA will continue gathering emissions data, conducting exposure analyses, and evaluating the need for additional controls. EPA also will incorporate toxics emissions data into the mobile source models.

Implement Market-based acid rain program.

For FY 2003 EPA will continue to carry out the market-based acid rain program, tracking emissions, auditing and certifying monitors, recording transfers of allowances, and reconciling emissions and allowances.

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

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

Research

EPA's NAAQS-related research program will develop new information and assess existing studies to support statutorily mandated reviews of the NAAQS and will upgrade methods and models needed to guide development of state implementation plans (SIPs), used to achieve the NAAQS. In FY 2003, tropospheric ozone research will evaluate and refine emissions and air quality models to support efforts by Agency, state, Tribal and local regulators, as well as industry, to improve SIPs for tropospheric ozone. The particulate matter (PM) research program will continue work to strengthen the scientific basis for the periodic review of the PM NAAQS, including conducting epidemiological and exposure studies. The PM program will also develop tools and methods for use by states, Tribal, and local regulators to assess control options to improve PM NAAQS implementation plans that will move the Agency toward its objective of reducing Americans' exposure to PM. Also included under this objective will be research to support review of the lead, carbon monoxide, sulfur dioxide, and nitrogen oxide NAAQS.

Air toxics research provides information on effects, exposure, source characterization, as well as other data to quantify existing emissions and to identify key pollutants and strategies for cost effective risk management. In FY 2003, research will focus on completing health assessments for some of the highest priority hazardous air pollutants, and providing the science and technical support to Agency, state, Tribal and local regulators to estimate health effects and exposures to hazardous air pollutants both indoors and outdoors and to reduce risks.

External Factors

Stakeholder participation. To achieve clean air, EPA relies on the cooperation of Federal, state, Tribal, and local government agencies; industry; non-profit organizations; and individuals. Success is far from guaranteed, even with the full participation of all stakeholders. EPA has significant work to accomplish just to reach the annual targets that lead to the longer term health and environmental outcomes and improvements that are articulated in the Clean Air

goal. Meeting the Clean Air goal necessitates a strong partnership among all the stakeholders, but in particular among the states, Tribes, and EPA; the Environmental Council of States; and organizations of state and local air pollution control officials. EPA will be working with various stakeholders to encourage new ways to meet the challenges of "cross regional" issues as well as to integrate programs to address airborne pollutants more holistically.

Environmental factors. In developing clean air strategies, states, Tribes, and local governments assume normal meteorological patterns. As EPA develops standards and programs to achieve the Clean Air goal, it has to consider weather as a variable in the equation for implementing standards and meeting program goals. For example, even if an area is implementing a number of air pollution control programs under normal meteorological patterns, a hot humid summer may cause an area to exceed standards for days at a time, thereby exposing the public to unhealthy air.

Litigation. In July 1997, EPA published revised, more protective NAAQSs for ozone and PM. The standards are currently under litigation. In February, 2001, the U.S. Supreme Court issued an opinion largely upholding EPA's position on several key issues related to these standards. The Supreme Court sent the case back to the U.S. Court of Appeals for the District of Columbia Circuit to address unresolved issues that challengers had raised before the D.C. Circuit. The D.C. Circuit had not addressed these issues before because it had remanded the standards to EPA based primarily on its finding that the Clean Air Act, as EPA had interpreted it, was unconstitutional -- a finding the Supreme Court has now reversed.

A decision from the D.C. Circuit on the unresolved issues related to the 1997 standards is expected in Spring 2002. Currently, EPA is evaluating the Supreme Court opinion, the opinions of the D.C. Circuit, and several legislative provisions to determine how to proceed. The Agency believes that the standards are necessary to protect public health and nothing in the decisions undercuts that belief. We are evaluating our programs to determine how best to secure necessary public health protections while still respecting the courts' decisions. This litigation does not affect standards that were in place prior to July 1997.

Clean Air

Objective: Attain NAAQS

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Attain NAAQS	**$441,056.4**	**$458,311.8**	**$458,856.3**	**$544.5**
Environmental Program & Management	$130,946.1	$119,768.2	$118,516.4	($1,251.8)
Hazardous Substance Superfund	$0.0	$24.1	$21.5	($2.6)
Science & Technology	$119,599.5	$138,553.0	$146,851.9	$8,298.9
State and Tribal Assistance Grants	$190,510.8	$199,966.5	$193,466.5	($6,500.0)
Total Workyears	1,330.5	1,363.0	1,357.1	-5.9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$1,264.2	$0.0	$0.0	$0.0
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$185,647.6	$199,966.5	$193,466.5	($6,500.0)
Carbon Monoxide	$4,062.3	$4,258.4	$4,025.1	($233.3)
Congressionally Mandated Projects	$21,903.7	$14,492.5	$0.0	($14,492.5)
EMPACT	$1,797.9	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$20,363.1	$18,978.9	$19,198.2	$219.3
Homeland Security	$0.0	$1,120.5	$0.0	($1,120.5)
Lead	$329.5	$342.2	$339.6	($2.6)
Legal Services	$5,145.8	$5,487.3	$5,973.1	$485.8
Management Services and Stewardship	$3,572.1	$4,395.3	$4,568.7	$173.4
Nitrogen Oxides	$1,379.4	$1,325.5	$1,399.0	$73.5

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Ozone	$68,106 3	$68,455.1	$77,498.8	$9,043.7
Particulate Matter	$55,617 3	$52,302.7	$62,624.3	$10,321.6
Particulate Matter Research	$65,457.3	$65,468.2	$66,662.0	$1,193.8
Regional Haze	$2,305.9	$2,535 9	$2,408.1	($127.8)
Regional Management	$252.6	$349.5	$310.1	($39.4)
Sulfur Dioxide	$12,158.1	$12,318.5	$13,624.7	$1,306.2
Tropospheric Ozone Research	$6.551.0	$6,514.8	$6,758.1	$243.3

2003 Request

Under the Clean Air Act, EPA must set and periodically review National Ambient Air Quality Standards (NAAQSs) for pollutants that are widespread, endanger human health and the environment, and originate from numerous and diverse sources. These pollutants include: ozone, particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead. Each pollutant and the programs that reduce it are described separately below. This objective also includes cross-pollutant preconstruction and operating permit programs. For each pollutant, EPA sets "primary" standards to protect human health, and "secondary" standards to protect the environment (e.g., crops, vegetation, wildlife, visibility, buildings, and monuments).

States and Tribes must develop and carry out strategies and measures to attain the NAAQSs. These strategies and measures are included in State Implementation Plans (SIPs) and Tribal Implementation Plans (TIPs). EPA works in partnership with Federally-recognized Tribes to carry out Federal trust responsibilities and implement those provisions of the Act that most effectively address air quality management concerns on Tribal lands. The Clean Air Act also requires states to develop programs to protect and improve visibility in national parks and wilderness areas. In addition, EPA establishes, implements, and enforces emissions reduction programs for source categories, such as motor vehicles and fuels, that are most effectively addressed at the national level.

In July 1997, EPA published revised, more protective NAAQSs for ozone and PM. The standards are currently under litigation. In February 2001, the U.S. Supreme Court issued an opinion largely upholding EPA's position on several key issues related to these standards. The Supreme Court sent the case back to the U.S. Court of Appeals for the District of Columbia Circuit to address unresolved issues that challengers had raised before the D.C. Circuit. The D.C. Circuit had not addressed these issues before because it had remanded the standards to EPA, based primarily on its finding that the Clean Air Act, as EPA had interpreted it, was unconstitutional -- a finding that the Supreme Court reversed.

EPA currently is evaluating the Supreme Court opinion, the opinions of the D.C. Circuit, and several legislative provisions to determine how to proceed. The Agency continues to believe that the revised standards are necessary to protect human health, and nothing in the decisions of the Courts changes that belief. EPA is resolving technical issues and developing guidance for

states and Tribes to begin implementing the 8-hour ozone standard, incorporating new innovative approaches to achieve early reductions that will help new areas attain the standard sooner.

The D.C. Circuit Court's 1999 decision did not affect the ozone and PM NAAQSs that were in place before July 1997. These NAAQS have not yet been met in a number of areas. To protect against backsliding during the litigation, EPA has reinstated the 1-hour ozone standard in those areas where it was revoked when the 8-hour ozone standard was established. EPA will continue to complete mid-course reviews for serious and severe areas under the 1-hour standard, review data for reclassification to attainment, review attainment date extensions, and provide oversight and guidance for other SIP revisions.

Ozone

Ozone can impair normal functioning of the lungs in healthy people, as well as in those with respiratory problems. Relatively low levels of ozone can cause coughing, shortness of breath, and pain, especially when taking a deep breath. Ozone also can worsen chronic lung diseases, such as asthma, and is associated with increased medication use, visits to emergency rooms, and hospital admissions. Ozone can inflame and damage the lining of the lung. Animal studies suggest that repeated occurrence of this type of inflammation over a long time period (e.g., months, years, a lifetime), may permanently scar lung tissue, causing reduced lung elasticity, permanent loss of lung function, and a lower quality of life. More people are exposed to unhealthful levels of ozone than to any other air pollutant. EPA estimates that meeting the new 8-hour ozone standard will protect 13 million more children living in areas where unhealthful levels of smog occur than under the previous standard.

Adverse ecosystem effects are known to occur for various species of vegetation and are likely to extend to entire ecosystems. Ozone damage to plants is extensive, with major impacts on commercial crops of wheat, corn, soybeans, cotton, and commercial forestry.

Working with States and Tribes

Unlike most other pollutants, ozone is not emitted directly into the air by specific sources, but is created by sunlight acting on nitrogen oxides (NO_x) and volatile organic compounds (VOCs). Some common sources that emit one or more of these pollutants include: motor vehicles, power plants, chemical manufacturing facilities, petroleum refineries, and printing/coating operations. Emissions of ozone precursors can be carried hundreds of miles from their origins and result in high ozone concentrations over very large areas of the country. This "transport" often affects the ability of states to attain the NAAQS through traditional SIP programs. To address this persistent and widespread problem, EPA will effect compliance under the NO_x SIP Call, implementing control measures through NO_x SIPs or Federal Implementation Plans (FIPs). The Agency expects this program to reduce total summertime emissions of NO_x by about 25 percent or 1.1 million tons beginning in FY 2004 in the affected 22 states and the District of Columbia.

EPA will administer the national program to implement the 1-hour NAAQS for ozone, providing oversight, coordinating among Regions and with states and Tribes to provide national

consistency, and developing policy and guidance to resolve major issues. States will continue to implement the 1-hour ozone standards. For nonattainment areas classified as "severe," states must conduct mid-course reviews to determine if the areas are on track to achieve attainment and revise control strategies if the area is not expected to achieve necessary emission reductions. EPA will review air quality data for areas classified "serious" and "severe" to determine if "bump-ups" to a higher classification are necessary and work with states, local agencies, and Tribes to identify additional control measures, as necessary.

EPA will continue technical support for the 1-hour ozone NAAQS program. The Agency will analyze 10-year trends in ozone concentrations for major U.S. cities, with adjustments for year-to-year variations in meteorological conditions. EPA will complete example applications for "mid-course review" of 1-hour ozone plans based on model applications, trends analyses, and other factors that can be used as part of a weight-of-evidence for demonstrating progress in attainment during FY 2004. In addition, the Agency will develop an example application demonstrating implementation modeling techniques to show attainment of the 8-hour ozone NAAQS.

EPA is working with states and Tribes on the development of implementation rules and guidance for the 8-hour ozone standard. EPA has begun a program to foster innovative approaches and new programs such as cool cities, pollution prevention efforts, smart growth options, and an ozone flex policy for the current 1-hour ozone standard. These programs are aimed at early voluntary reductions that can assist in the transition from the 1-hour to the 8-hour ozone standard, particularly for those areas that are just meeting the 1-hour standard and may not be meeting the 8-hour standard. By implementing early reductions through some of these innovative programs, areas may be able to attain the 8-hour standard prior to designations occurring. The Agency will continue to work with states, local governments, and Tribes to adapt these approaches to specific urban areas.

Section 183(e) of the Clean Air Act requires EPA to list those categories of consumer or commercial products that the Administrator determines, based on a study, account for at least 80 percent of VOC emissions, on a reactivity-adjusted basis, from consumer or commercial products in areas that violate the NAAQS for ozone. The Act requires EPA to divide the list into four groups, establishing priorities for regulation based on specific factors listed in section 183(e). Every two years after promulgating the list, EPA must regulate one group of categories until all four groups are regulated. On March 23, 1995, EPA published the section 183(e) product category list and schedule for regulation that established the four groups and the deadlines for their regulation. Groups I through III regulations were due in March of 1997, 1999, and 2001, respectively, and Group IV regulations are due March, 2003.

On March 18, 1999, EPA published a revised schedule for regulation that moved some categories to later groups. To date, the Agency has regulated only the categories in Group I. In July 2001, the Sierra Club filed a total of seven complaints in the D.C. District Court alleging failure of EPA to meet statutory deadlines in the Clean Air Act, including the requirements of section 183(e)(3)(A). Group II includes flexible package printing materials and Group III includes aerosol spray paints, industrial cleaning solvents, flatwood paneling coatings, and

lithographic printing materials. Although there is no consent agreement on addressing this requirement, EPA will focus efforts on developing these proposed rules in FY 2003.

In FY 2003, EPA will continue to assess the science of reactivity of VOCs in the atmosphere and to develop a comprehensive policy that addresses the impact of reactivity on ozone, PM, and toxics emission reduction programs. EPA will provide guidance on SIP program requirements and will continue to work with the Federal Aviation Administration on airport emissions and with other Federal agencies on applicability of the general conformity rule. EPA also will review 1-hour data for redesignation to attainment and work with areas eligible for redesignation to develop maintenance plans. The Agency will continue to work with Tribes, completing VOC and NOx emission inventories, developing TIP requirements, and addressing issues unique to Tribal lands.

To better assess the causes of the ozone problem, EPA will continue to collect ambient air measurements for a target list of VOCs (precursors to both ozone and PM), as well as for nitrogen compounds, ozone, and both surface and upper air meteorological conditions. National and local analyses of the data provides: 1) insight into how ozone precursors and toxic pollutants contribute to the ozone problem: 2) a trends assessment of ozone, ozone precursors, and toxic pollutants; 3) an evaluation of pollutant management programs; and, 4) a database for developing control strategies. EPA also will explore and implement improvements to emissions testing and monitoring approaches for VOCs, including better and less expensive continuous monitors and more reliable techniques for analysis of water-based coatings, inks, and other solvents. EPA also will work to improve emissions testing and monitoring of NO_x emissions required in SIPs.

Urban and regional-scale numerical grid models (i.e., UAM-IV, UAM-V, CAMx, etc) continue to be used extensively for analysis of ozone issues and preparation of SIPs during FY 2002 and are expected to continue into FY 2003 and beyond. In addition, the use of other modeling systems (i.e., REMSAD and Models-3) will continue in support of Regional Planning Organizations (RPOs) for addressing regional haze and for $PM_{2.5}$. The applicability of such models will also benefit such programs as the Great Lakes Initiative, U.S./Mexico Border, U.S./Canada, and the air toxics program. EPA, states, Tribes, and RPOs will work collaboratively in developing the capability to use these models, evaluate their accuracy and applicability to complex air quality issues, test and analyze emission control alternatives, as well as share information on model input data and estimates of ambient concentrations. Models-3 is expected to be the focus of significant efforts for evaluation, testing, and application to multi-pollutant programs. EPA will focus extensively on public outreach and information to provide high quality information for general and technical audiences to facilitate public understanding, so that individuals can make choices about activities that might decrease personal risk on days when air pollution levels are high. Improved information quality and access will enable citizens and users to obtain "real-time" air quality information and enable EPA to better track environmental indicators and assess progress.

Development of an integrated, multi-pollutant emissions model, the Sparse Matrix Operator Kernel Emissions (SMOKE), will be completed in FY 2003. The SMOKE model is an emissions model that prepares an emission inventory for subsequent air quality modeling by providing the specific emission inputs needed for other modeling. The SMOKE model runs

mobile and biogenics emissions models to produce the required inputs for these emission inventories. EPA is updating these emission models to use new data sets. These data sets include land use and census data. The Agency is working to improve these data sets by getting more updated data (e.g., 2000 census data), and looking for additional land use categories that would better reflect the spatial distribution of emission sources within a county.

Applications of a "one-atmosphere" modeling system (Models-3/CMAQ) also will be completed for assessing the impact of new national rules and policy assessments (e.g., multi-pollutant, non-road, PM NAAQS Regulatory Impact Assessment, toxics deposition, U.S./Canada transboundary issues) on multiple pollutants and their species components. Model outputs will be used to assess the impact of the rules on attainment of standards, support for regulatory/legal actions, and benefits analyses. This activity will be supported through continued partnerships with the Office of Research and Development (ORD) in operating a Center for Community Modeling to support, maintain, and enhance Models-3/CMAQ within the scientific community.

In FY 2003, linkages between global and regional air quality and climate change would be assessed using hemispheric and regional scale modeling tools. The impact of emissions changes on the global and regional distribution of ozone and PM will be estimated. Control strategies will be modeled and recommendations made for reducing the impacts of foreign and domestic emissions increases/reductions on the intercontinental transport of these pollutants and their implications for regional air quality and global climate change.

Mobile Source Ozone Controls

To address the need for further reductions in motor vehicle emissions to help attain and maintain the current as well as the new NAAQS, the Agency will implement current motor vehicle and fuel standards and develop new programs. In calendar year 1996, light-duty vehicles (LDVs) and light-duty trucks (LDTs) contributed more than 22 percent of national NO_x emissions and 25 percent of VOC emissions. Heavy-duty trucks and buses also contribute greatly to the nation's air quality problems, accounting in calendar year 2000 for about one-third of NO_x emissions from mobile sources. To address these issues, in FY 2000, the Agency promulgated the Tier II program for LDVs/LDTs to begin in model year 2004. This program established new tailpipe standards for all passenger vehicles and new limits for sulfur in gasoline. The new standards will reduce NO_x emissions by 2 million tons per year by calendar year 2020 and nearly 3 million tons annually by calendar year 2030. In FY 2003, EPA will continue the implementation of the Tier II regulations for LDVs, LDTs, and medium-duty passenger vehicles. This will allow manufacturers to certify they meet Tier II standards under early opt-in provisions for Tier II. In addition, EPA will continue work to implement the new gasoline sulfur standards.

In FY 2001, the Agency promulgated new standards for heavy-duty vehicles and engines. Before these standards were promulgated, gasoline trucks in FY 1997 and reaffirmed in FY 2000 were required to be 78 percent cleaner and diesel trucks to be more than 40 percent cleaner than today's models. These requirements were designed to reduce NOx emissions by 2.4 million tons annually when the program is fully implemented in calendar year 2030 and thereafter. The new 2001 standards established a comprehensive national program that will regulate trucks and buses

and diesel fuel as a single system with the new emission standards taking effect in model year 2007. Under this program, new trucks and buses will be more than 90 percent cleaner than current models, resulting in a reduction of 2.6 million tons of NO_x emissions in calendar year 2030.

In FY 2003, the Agency will continue work to implement the new 2007 heavy-duty highway engine and diesel sulfur requirements. This includes continued assessment of the development of engine after-treatment technology and its sensitivity to diesel fuel sulfur levels. In addition, EPA will continue work on a rulemaking to establish new standards for heavy-duty non-road, land-based diesel engines and vehicles, potentially including new sulfur requirements for non-road diesel fuel. Additionally in FY 2003, the Agency, as part of the implementation of the existing Tier I and National Low Emission Vehicle (NLEV) programs, will continue to ensure that emission benefits from these programs are achieved through vigorous compliance programs.

The National Vehicle and Fuels Emissions Laboratory (NVFEL) will continue to conduct vehicle emission tests as part of the pre-production tests, certification audits, in-use assessments, and recall programs to support mobile source clean air programs. In FY 2003, EPA will continue conducting testing activities for fuel economy, LDV and heavy-duty engine (HDE) characterization, Tier II testing, reformulated gasoline, future fleets, OBD evaluations, certification audits and recall programs. EPA also will continue to conduct separate in-use testing on heavy-duty diesel engines to ascertain compliance with consent decrees related to violations of defeat device prohibitions and will expand its in-use presence to include non-consent decree engines and non-road diesel engines as well. EPA will continue testing of heavy-duty diesel engines to support implementation of 2007 requirements, non-road diesel engine rulemaking activities, and development of Portable Emission Measurement Systems (PEMS). In addition, NVFEL will conduct energy efficiency tests of electric vehicles in collaboration with the Department of Energy (DOE) and non-road vehicle emission testing in support of non-road regulatory development.

To support confirmatory and compliance programs, the NVFEL will conduct 400 certification and fuel economy tests on LDV, LDT and Light Heavy-Duty Vehicles (LHDV) and will conduct 240 compliance tests on in-use LDVs and LDTs. NVFEL will also conduct an approximately equivalent amount of testing of LDV and heavy-duty engines.

To ensure achievement of the goals of the Clean Air Act through Tier II and the 2004 and 2007 Heavy-Duty Engine Regulations, EPA will require an investment of $14 million to upgrade EPA's vehicle and engine testing capabilities at the NVFEL. This funding will provide essential laboratory equipment to perform new, highly sophisticated, emissions testing on vehicles and engines to ensure compliance with these more stringent regulations.

The NVFEL provides critical support to EPA, the states, the fuels industry, and the automobile industry by testing vehicles and engines for compliance with Federal clean air standards. Tests are conducted on motor vehicles, heavy-duty engines, non-road engines, and fuels to: (1) certify and/or confirm that vehicles and engines meet Federal air emissions and fuel economy standards; (2) ensure engines comply with in-use requirements; and (3) ensure fuels,

fuel additives, and exhaust compounds meet Federal standards. By FY 2003 a dramatic change in the type and amount of testing will be required at the NVFEL as a result of new Federal regulatory standards (Tier II and Heavy-Duty Engine) becoming effective and advancements in vehicle emission control technologies.

An investment of $14 million in laboratory modernization will address three critical areas:

- Tier 2 Emission Standards Compliance Testing - $8.5 million for emission measurement system upgrades required to fully implement and enforce the new Tier 2 emission standards and test procedures for all passenger cars and light trucks beginning with the 2004 model year. This includes the capability to compliance test new vehicle designs at extremely low emission levels prior to issuing a certificate allowing production and sale of compliant vehicles. It also provides the capability to confirm in-use vehicle or engine emissions performance by conducting in-use vehicle testing programs for enforcement purposes.

- Heavy-Duty Engine Emission Standards Testing - $3.0 million for emission measurement system upgrades required to implement and enforce the model year 2004 and 2007 Diesel Engine Standards for on-highway, heavy-duty engines. This includes the capability to measure NOx emissions at extremely low levels in order to compliance test new model year 2004 heavy-duty engine designs. In addition, the upgrade includes the capability to measure PM emissions at extremely low levels in order to compliance test new model year 2007 heavy-duty engine designs prior to issuing a certificate allowing production and sale of compliant vehicles. Although the low PM standards are not required until the 2007 model year, EPA expects some manufacturers will introduce clean engines sooner to generate early reduction credits. The system upgrades also will provide the capability to confirm in-use engine performance by carrying out in-use engine testing programs for enforcement purposes.

- Next Generation Emission Measurement Systems Testing - $2.5 million for digital and computer-based emission measurement system upgrades required to accurately measure the next generation of emission control systems.

The ability to perform these tests will ensure fulfillment of the goals of the Clean Air Act to protect the health of all Americans. EPA calculates that when fully implemented in 2030, the final Tier II rule will prevent as many as 4,300 deaths, more than 10,000 cases of chronic and acute bronchitis, and tens of thousands of respiratory problems a year. The Tier II program will allow 120 million Americans now living in areas with dangerous pollution levels to enjoy cleaner air.

The emission reductions resulting from the Heavy-Duty Engine Regulations will prevent as many as 8,300 premature deaths, more than 9,500 hospitalizations, and 1.5 million work days lost. Diesel engines emit large amounts of NO_x and PM, both of which contribute to serious public health problems in the U.S., including lung cancer, aggravation of respiratory and cardiovascular disease, aggravation of existing asthma, acute respiratory symptoms, chronic

bronchitis, and decreased lung function. With both ozone and PM, children and the elderly are most at risk.

In FY 2002, EPA plans to promulgate regulations addressing emissions from a range of unregulated non-road sources, including industrial spark-ignition engines (e.g., forklifts and generators), recreational vehicles, and recreational marine engines. These standards will significantly reduce emissions, carbon monoxide, toxics, and other emissions that contribute to ozone formation. In FY 2003, the Agency will start work to implement these new standards.

EPA will continue implementing other mobile source programs addressing ozone precursor emissions. The first two phases of emission standards for locomotives, which will result in more than a 60 percent reduction in locomotive NO_x emissions, were implemented in calendar years 2000 and 2002, respectively. The next phase of locomotive standards will take effect in calendar year 2005. In FY 2003, the Agency will continue to evaluate certification test data to ensure locomotive designs comply with standards.

Another recent program that EPA will continue implementing in FY 2003 is the Phase 2 standards for small spark-ignition handheld engines (e.g., trimmers, brush cutters, and chainsaws). The phase in schedule of these new standards began with the 2002 model year. This program will reduce hydrocarbon (HC) and NO_x emissions by 70 percent. This is equivalent to an annual reduction of 500,000 tons of HC and NO_x by the calendar year 2027. This reduction is accompanied by an overall reduction in fuel consumption.

Using an existing portable emission measurement system that was developed by EPA for measuring real world in-use emissions – the Real-time On-board Vehicle Emission Reporter (ROVER) -- the Agency began in FY 2001 to test trucks on-highway for compliance with emission standards. EPA screened 41 separate engine families for high NO_x emissions. This program was extended in FY 2002 and expanded to include state participation. In FY 2003, EPA will continue the program and will obtain the participation of additional states interested in monitoring heavy-duty diesel emissions.

An important element of the Agency's work on controlling emissions is to ensure emission data is obtained from the different categories of mobile sources. In FY 2000, the Agency increased its focus on the development of a portable emission measurement system that will allow the Agency to acquire in-use emission data in a cost-effective manner. In FY 2001-2002, EPA refined its in-use NO_x measurement capability. In FY 2003, EPA will continue further testing and development of the complete system to include PM and toxics measurement capability. The Agency plans to continue using portable systems to characterize in-use emissions from light-duty vehicles, heavy-duty highway vehicles, and non-road equipment. The newly acquired emission data will enhance EPA's emission models. In the long-term, portable sampling systems will find widespread application by EPA, states, and industry for compliance and in-use emission monitoring purposes.

The Agency also will emphasize improvements in its transportation emission models in FY 2003. In FY 2002, EPA developed an architectural framework for a new generation model that will greatly improve the Agency's ability to support the development of emission control

programs, as well as providing support to the states in their determination of program needs to meet air quality standards. The Agency will continue developing the new transportation emission model in FY 2003, as well as providing guidance and training in the use of mobile source models.

EPA will partner with states, Tribes, and local governments to create a comprehensive compliance program to ensure that vehicles and engines are clean. EPA will use advanced in-use measurement techniques and other sources of in-use data to monitor the performance of on-board diagnostic (OBD) systems on vehicle models to make sure that OBD is a reliable check on the emissions systems as part of vehicle Inspection and Maintenance (I/M) programs. With this information, EPA will work to establish an integrated information system that allows for assessment and action on those vehicles and engines that present the greatest environmental risk. Additionally, EPA will continue its public education and outreach efforts to ensure that the public and vehicle repair technicians understand OBD.

In FY 2002, 34 states are operating I/M programs. EPA will continue providing technical and programmatic guidance to states and local agencies for implementing these programs. Beginning in FY 2002, EPA is assisting the states in incorporating OBD inspections into operating I/M programs. EPA will support states in the evaluation of I/M programs, as directed by the Clean Air Act and the National Highway System Designation Act.

As part of implementing the ozone standard and regional haze rule, EPA's Transportation Air Quality Center, in cooperation with the Department of Transportation, will continue assistance to states and local governments including implementation of the transportation conformity requirements. EPA will continue to ensure national consistency in adequacy findings for motor vehicle emissions budgets in air quality plans.

In addition, EPA will work with states and local governments to ensure the technical integrity of the mobile source controls in the SIPs. EPA will assist areas in identifying the most cost-effective control options available.

EPA will continue to develop partnerships that emphasize the development of innovative transportation control strategies and voluntary mobile source programs. The Agency will continue providing technical guidance for implementing the National Low Emission Vehicle program.

The Agency will continue implementing Phase II of the reformulated gasoline (RFG) program, which will result in additional VOC, NO_x, and toxic emission reductions in 17 states and the District of Columbia, and will provide technical and programmatic guidance to states implementing clean fuel programs. RFG is designed to substantially reduce vehicle emissions of ozone-forming and toxic pollutants and it is estimated to reduce VOC emissions nationally by 27 percent, toxic emissions by 22 percent, and NO_x emissions by 6.8 percent. This is the equivalent of taking 16 million vehicles off the road. EPA will continue to address issues associated with the use of oxygenates (e.g., MTBE and ethanol) in RFG. EPA will process approximately 100,000 fuel quality reports and review 156 fuel surveys with 17,000 samples.

The President's National Energy Policy (NEP) directs EPA to study opportunities to maintain or improve environmental benefits of state and local "boutique" clean fuel programs. A total of 11 states have banned and 12 more are considering banning MTBE as a gasoline additive. This threatens to encourage proliferation of "boutique" fuel requirements, which, in times of disruption, can create fuel production and distribution system logistical problems. EPA is currently evaluating options to fulfill this NEP directive, while exploring ways to increase flexibility in the fuels production and distribution system.

The mobile source compliance program will oversee more than 225 original equipment manufacturers to ensure that vehicles and engines (both on-highway and non-road) will meet the applicable emission standards throughout their useful life. The program issues nearly 2,200 certificates of conformity annually. Compliance is audited and ensured through pre-production certification and confirmatory testing, assembly line testing, various special audit programs, and in-use testing and recall. For light-duty vehicles and trucks, there also is a fuel economy compliance program, which in FY 2003 will issue 1,000 fuel economy consumer labels, data for the EPA/DOE Gas Mileage Guide and "gas guzzler" tax collection, and data to calculate the Corporate Average Fuel Economy (CAFÉ) values for all light-duty manufacturers. The mobile source fees program will collect approximately $11 million in FY 2003, offsetting costs of the certification, recall, selective enforcement audit, and fuel economy programs. This fee program will be updated through a rulemaking that will eventually offset the entire cost of the above compliance programs.

The FY 2003 model year will be the third year of mandatory participation in the Agency's new compliance assurance program (CAP 2000). CAP 2000 will simplify and streamline the current procedures for pre-production certification of new motor vehicles. Manufacturers are projected to save $55 million each year under the CAP 2000 program. Under CAP 2000, manufacturers are required to supply in-use test data for each class of vehicle sold. These data will be an important tool for the Agency in targeting its recall testing investigations.

Particulate Matter

PM is the term for solid or liquid particles found in the air. Some particles are large enough to be seen as soot or smoke. Others are so small that they can be detected only with an electron microscope. The PM NAAQS were revised in 1997 in part to separately address both the coarse and fine fractions of inhalable particles. Because particles originate from a variety of mobile and stationary sources (diesel trucks, wood stoves, power plants, etc.), their chemical and physical compositions vary widely. PM can be directly emitted or can be formed in the atmosphere when gaseous pollutants, such as SO_2, VOCs, and NO_x, react to form fine particles.

Both coarse and fine particles can accumulate in the respiratory system and are associated with numerous health effects. Coarse particles can aggravate respiratory conditions such as asthma. Exposure to fine particles is associated with several serious health effects, including premature death. Health effects have been found to be associated with PM exposures that occur both over short-term periods (such as a day) and long-term periods (a year or more). When exposed to PM, people with existing heart or lung diseases—such as asthma, chronic obstructive pulmonary disease, congestive heart disease, or ischemic heart disease—are particularly

vulnerable and may be at increased risk of premature death or admission to the hospital or emergency room. The elderly also are sensitive to PM exposure. They are at increased risk of admission to hospitals or emergency rooms and, perhaps, premature death from heart or lung diseases. When exposed to PM, children and people with existing lung disease may not be able to breathe as deeply or vigorously as they normally would, and they may experience symptoms such as coughing and shortness of breath. PM can increase susceptibility to respiratory infections and aggravate existing respiratory diseases, such as asthma and chronic bronchitis, causing increased medication use and increased doctor visits.

In FY 2002, as part of the regular NAAQS reviews required by the Clean Air Act, EPA will complete and make available to the public a comprehensive assessment of the recent scientific findings regarding air quality, exposure, and health and environmental effects of PM in the PM Criteria Document. Based on the scientific information in the PM Criteria Document, EPA is preparing a Staff Paper that will evaluate the policy implications of the available scientific information and identify critical elements that should be considered in the Administrator's decision whether to retain or revise the PM NAAQS. The Criteria Document and Staff Paper will be reviewed by the Clean Air Scientific Advisory Committee (CASAC) and made available for public comment. Following completion of these documents, EPA will propose whether to retain or revise the PM NAAQS.

In FY 2003, EPA will continue to assist states, local governments, and Tribes in maintaining existing control programs and in devising stationary source and mobile source strategies to reduce PM. EPA will provide guidance on SIP requirements, the impact of fire and agricultural processes on PM levels, and benefits to PM implementation of regulations designed for controlling toxics. EPA will provide guidance that integrates any future implementation of PM standards with implementation of the regional haze rule.

EPA and states will expand outreach efforts to promote public awareness of the Air Quality Index. The Agency will develop a strategy for transition from the old PM_{10} standard to the new $PM_{2.5}$ standard and a series of guidance documents for implementing the new standards. These guidelines will resolve technical issues and establish early reduction strategies similar to those used for ozone implementation.

EPA will work with partners to develop improved emission factors (including gathering improved activity data bases and utilization of GIS and satellite remote sensing where possible) for key point source, area source combustion and fugitive dust source categories and global emission events. EPA will coordinate with stakeholders on the development of a real time data system to catalogue wildland fire events, improve emission models for these fires, and demonstrate ways to reduce agricultural emissions. The Agency also will respond to inventory needs identified by the National Academy of Sciences review of CAFO ammonia emissions.

EPA is better characterizing $PM_{2.5}$ concentrations, sources and emissions by assisting states and Tribes in establishing and maintaining a nationwide monitoring network and carrying out source characterization analyses. Since promulgating the new $PM_{2.5}$ standards, EPA has been working with states and Tribes to install monitors and obtain data on $PM_{2.5}$ particle emissions. This compliance network was fully operational as of December 31, 1999. EPA also

will promote the use of continuous PM monitoring and improved PM test methods. States and Tribes will use the air quality data and chemical speciation data to identify PM sources and "hot spots" for purposes of developing future SIPs and TIPs. As recommended by NAS, EPA is discussing with the Clean Air Scientific Advisory Committee ways to increase the usefulness of the resultant monitoring data to PM health researchers. Monitoring data for PM_{10} will continue to be used to characterize emission sources, evaluate air quality models, and contribute to the regular scientific review of the standard.

EPA will carry out statistical analysis and source apportionment techniques that provide understanding of the spatial and temporal distribution of $PM_{2.5}$ and its constituents. The main focus of the analysis will be to support decisions and development of decision tools on $PM_{2.5}$ nonattainment boundaries In addition, enhancement of real time air quality forecasting for PM based on applications of numerical grid models will be fostered and a regular forecast program implemented for a limited area. Additionally, web-based analysis tools on EPA's AMTIC Web site will be implemented. These tools will provide routine plots and tables based on user input. This will add to the analytical tools (e.g. PMF, UNMIX) that are now being used to analyze $PM_{2.5}$ data.

To ensure the source and ambient monitoring measurements are credible, EPA will continue to develop and conduct quality assurance protocols. Currently efforts are focused on the quality assurance of the ambient $PM_{2.5}$ monitoring network because of its recent establishment. In FY 2002 and beyond, EPA also will improve source testing and monitoring methods for PM emissions from stationary sources. These method improvements are needed at this time for characterization of $PM_{2.5}$ emissions. The improved methods will also be available for determining compliance with any future $PM_{2.5}$ SIP emission limits that may be needed.

Levels of PM caused by mobile sources may rise in the future due to the projected increases in the number of individual mobile sources and in motor vehicle travel. The Agency will continue to seek further reductions in motor vehicle emissions to attain and maintain the NAAQSs through the review of current motor vehicle and fuel standards and the development of new programs. Heavy-duty trucks and buses today account for one-quarter of PM emissions from mobile sources. In some urban areas, the contribution is even greater. In FY 2001, EPA promulgated the new diesel fuel standards and heavy-duty vehicle and engine standards that will significantly reduce emissions from diesel trucks and buses. The new program will result in a fleet of trucks and buses with PM emission levels that are 90 percent below those of their 2000 model year counterparts. By 2030, the program will reduce annual emissions of PM by 109,000 tons. In FY 2003, the Agency will continue working toward implementing these standards. This includes continued assessment of the development of new emission control technology. In addition, EPA will continue work on new standards for heavy-duty non-road, land-based diesel engines and vehicles, including potentially new diesel fuel sulfur requirements.

In FY 2003, EPA will continue to help create voluntary diesel retrofit projects to reduce PM from older, high-polluting trucks and buses. In some cases, EPA will help fund the costs of purchasing emission control devices, such as PM filters and oxidation catalysts. EPA also will increase efforts to promote the use of emerging retrofit emission control technology and will

partner with states, EPA Regional offices, local governments, private fleets, and industry members.

The President's National Energy Policy directs EPA and the Department of Transportation (DOT) to develop a program to address the concern of idling trucks at truck stops and other rest areas. To address this directive, EPA will develop partnership agreements with truck fleets, the truck stop industry, manufacturers of idle control technologies, and local and state governments to create incentives for implementation of idle control technologies, and remove barriers that truckers have identified. EPA also will create interstate corridor projects where truckers can use alternatives such as truck stop electrification at their regular stop-overs. Idling strategies will be used in conjunction with other programs in EPA's Freight Management Partnership initiative to get the trucking industry to achieve substantial fuel savings and emission reductions. The long-term emission reductions from these demonstration projects alone will result in fewer cases of premature death, hospitalization, and respiratory problems.

In FY 2003, EPA will continue implementing other mobile source programs addressing PM emissions. The emission standards for locomotives, which will result in more than 40 percent reduction in PM, began in 2000 (Tier 0). Tier 1 standards took effect in FY 2002 and Tier 2 standards will take effect in FY 2005. In FY 2003, the Agency will continue to evaluate certification test data to insure locomotive designs comply with standards.

As discussed earlier for ozone, an important element of the Agency's work in controlling emissions is to ensure the accuracy of emission data from the different categories of mobile sources. In 2000, the Agency increased its focus on development of a portable emission measurement system that will allow the Agency to acquire in-use emission data in a cost-effective manner. In FY 2001-2002, EPA refined its in-use NO_x measurement capability. In FY 2003, EPA will continue the testing and development of this system to include PM and toxics measurement capability. The Agency plans to continue using this portable system to characterize in-use emissions from light-duty vehicles, heavy-duty highway vehicles, and non-road equipment. The newly acquired emission data will enhance our emission models.

Improving EPA models is another area that the Agency will be addressing in FY 2003. In FY 2001, EPA started the development of an architectural framework for a new generation model that will greatly improve the Agency's ability to support the development of emission control programs, as well as providing support to the states in their determination of program needs to meet air quality standards. The Agency will continue the development of the new model in FY 2003. The Agency also will continue providing guidance and training in the use of mobile source models.

EPA will develop a series of guidance documents for the particulate matter program to provide infrastructure for implementing the new standards. EPA will continue public outreach activities, especially to create materials for the general public on fine PM.

In FY 2002, EPA will complete development of a PM measuring system for use with its portable emission monitoring systems described above. In FY 2003, the Agency will put the new technology to use in monitoring and enforcing compliance with diesel PM standards.

Visibility

Visibility impairment, caused by the presence of tiny particles in the air, is most simply described as the haze that obscures clarity, color, texture, and form. The Clean Air Act gives special protection to natural areas that Americans want to preserve for future generations, such as national parks and wilderness areas.

EPA promulgated a final regional haze rule in FY 1999. Because of regional variations in natural conditions that combine with man-made pollution to produce regional haze, EPA believes that regional haze should be addressed through a region-specific program that accounts for these variations. EPA worked with states to establish five regional planning organizations. EPA is working closely with the Regional Planning Organizations (RPOs) to develop the technical basis for future policy decisions and tailor programs that take into account the varying conditions in the different geographical areas.

In FY 2001, EPA proposed Best Available Retrofit Technology (BART) rules that would require certain larger, older utilities and other industrial plants to install BART as part of a state's strategy for improving visibility. The proposal provides guidelines to states in selecting the plants where BART should be applied and determining the type of controls to be installed. The proposal will undergo a public comment period and should be finalized in FY 2002. In FY 2003, EPA will be working closely with RPOs to develop plans for implementing this rule.

In FY 2002, EPA is releasing two guidance documents to assist states and Tribes in implementing the regional haze rule. The Tracking Progress guidance document is intended to provide a consistent way to evaluate changes in visibility impairment in Class I areas under the regional haze program. The purpose of the Natural Visibility guidance document is to provide guidance to the states and Tribes in implementing the regional haze program.

In FY 2003, the EPA would continue providing funding to the National Park Service (NPS) to run the IMPROVE network and supplementary state and tribal protocol ($PM_{2.5}$ speciation) sites. EPA will also continue its coordination role with states, Tribes and the NPS to facilitate better visibility monitoring.

EPA will continue to support RPOs concerned with regional haze and PM impacts through the set up and application of regional scale models (e.g., CMAQ & REMSAD). Included in this activity will be preparation of meteorological models and data bases for calendar year 1999-2001, preparation of emissions inputs to models and development of emissions projections, and evaluation of model accuracy based on the latest years of speciated PM data. These model applications will serve as a preliminary basis to assess regional emission control strategies necessary for $PM_{2.5}$ SIPs and regional haze goals. Training in the use of these models will be continued on a basis of need.

Implementation of NAAQS and Visibility Requirements

Ground-level ozone, fine PM, and regional haze have many similarities. Both ozone and PM (and the resulting regional haze) remain in the atmosphere for days, leading to regional scale transport that can affect broad areas of the country. Both pollutants are formed under certain atmospheric conditions by gases, such as NO_x and VOCs, emitted by the same types of sources. There are similar health effects associated with exposure to ozone and PM (e.g., increased respiratory symptoms and increased hospital admissions and emergency room visits for respiratory causes). The similarities between the pollutants and the regional haze problem provide opportunities for integrated strategies for reducing pollutant emissions in the most cost-effective ways.

EPA also recognizes the increased burden on state and local agencies in controlling multiple pollutants. To address this EPA is developing technologies to help states form control strategies to address the multiple pollutants with NAAQSs. One of the activities EPA is currently engaged in is developing an integrated ambient monitoring strategy to determine the optimal number of monitors and associated work-hours needed for each pollutant, given the competing needs of measuring the other pollutants. As states, Tribes, or local agencies determine the need to add monitors or change location of monitors in the network, they can use this strategy to minimize any increase in resources needed.

The strategy for implementing any new ozone and particulate matter standard together with regional haze requirements will be targeted at maintaining air quality protection efforts currently underway and building on the agreements and progress already made by communities and businesses. In carrying out the implementation strategy, EPA will seek to reward state, Tribal, and local governments and businesses that take early action to reduce air pollution levels through cost-effective approaches and address pollution that travels across jurisdictional lines. EPA will work with states and Tribes to develop innovative strategies and control programs that employ regulatory flexibility to minimize economic impacts on businesses to the greatest possible degree consistent with protecting human health and the environment. EPA also will attempt to minimize regulatory burdens for states, Tribes, local governments, and businesses and ensure that air quality planning and related Federal, Tribal, state, and local planning are coordinated.

Carbon Monoxide

CO is a colorless, odorless gas that enters the bloodstream and interferes with the delivery of oxygen to the body's organs and tissues. The health threat from exposure to ambient concentrations of CO is most serious for those who suffer form cardiovascular disease. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, decreased learning ability, and difficulty in performing complex tasks.

In FY 2001, the NAS began a two-year study for EPA of CO episodes associated with meteorological and topographical problem areas and strategies for these nonattainment areas.

In FY 2002, EPA will issue new standards for a range of unregulated, non-road sources, including industrial spark-ignition engines (e.g., forklifts and generators), recreational gasoline engines (e.g., snowmobiles and off-road motorcycles), and recreational marine gasoline and diesel engines. These new emission standards will reduce emissions from engines that potentially expose people to high concentrations of harmful exhaust pollutants.

EPA currently is reviewing the NAAQS for CO and has completed the CO criteria document. The Agency anticipates completing the Staff Paper in FY 2002. After taking into account Clean Air Science Advisory Committee review and public comment, EPA expects to propose a decision whether to retain or revise the standards in FY 2003 and issue a final decision in FY 2004.

In FY 2003, EPA will continue to assist states, Tribes, and local agencies in implementing strategies to reduce CO, review data for redesignations to attainment, and assist states in developing plans, as necessary, to maintain compliance with CO standards. As a result of these efforts, EPA expects an additional four areas to attain the NAAQS for CO in FY 2003.

Sulfur Dioxide

SO_2 belongs to the family of gases called sulfur oxides (SO_x). These gases are formed when fuels (mainly coal and oil) containing sulfur are burned and during metal smelting and other industrial processes. The major health concerns associated with exposure to high concentrations of SO_2 include effects on breathing, respiratory illness, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease. Children, the elderly, and people with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most susceptible to adverse health effects associated with exposure to SO_2. In the atmosphere, SO_2 can react to form fine particles that may aggravate respiratory disease and lead to premature death. SO_2 is also a precursor to sulfates, which are associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, and reduced visibility.

EPA will continue to ensure that all areas are in compliance with the standard and will review the standard, as the Clean Air Act mandates, to ensure that it adequately protects human health. The D.C. Circuit Court of Appeals has remanded for further explanation EPA's most recent decision not to revise the SO_2 NAAQS for a better explanation of why the Agency did not set a 5-minute SO_2 standard. In a January 9, 2001 Federal Register notice, EPA announced it would await a Supreme Court decision on the ozone and PM NAAQS before responding to the SO_2 remand. Since the Supreme Court decision remanded the case back to the D.C. Circuit Court for further proceedings, EPA's response to the remand on the SO_2 NAAQS will await a decision from that court. In the same notice, EPA provided new 5-minute data and analyses of that data. In FY 2002, EPA will collect 5-minute monitoring data from areas selected in consultation with regions/states/locals and the American Lung Association. This data will be analyzed in FY 2003. Following analysis of the data, EPA will make a determination whether to finalize the intervention level program previously proposed. This program gives states guidance on identifying and addressing high, short-term peaks that occur for short durations (five minutes) but that can cause bronchial constriction in asthmatics, a serious health concern. In FY 2003, EPA will increase efforts to reduce the more pervasive sulfur oxide emissions through the acid

rain, PM, and regional haze programs that are described under those objectives. These efforts will result in nine additional areas coming into compliance with the SO_2 NAAQS in FY 2003.

Nitrogen Dioxide

NO_2 belongs to a family of highly reactive gases called nitrogen oxides. Nitrogen oxides form when fuel is burned at high temperatures and result primarily from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. NO_2 is the most widespread and commonly found nitrogen oxide and is a matter of public health concern. With regard to human health effects, NO_2 can cause respiratory symptoms such as coughing, wheezing, and shortness of breath in children and adults with respiratory disease, such as asthma. Even short exposures to NO_2 affect lung function. In children, repeated short-term exposures can increase the risk of respiratory illness. Animal studies suggest that long-term exposure to lower levels of NO_2 may increase susceptibility to respiratory infection and may cause permanent structural changes in the lungs. Nitrogen oxides can also serve as precursors to ozone and PM. Nitrogen oxides react with VOCs in the presence of sunlight to form smog. NO_2 can be converted into fine nitrate aerosols, a constituent of fine particles ($PM_{2.5}$). In addition, it is a strong oxidizing agent and reacts in the air to form corrosive nitric acid as well as toxic organic nitrates. They can also have adverse effects on both terrestrial and aquatic ecosystems, contributing to acid rain and eutrophication in coastal waters.

EPA has made progress toward reducing the emissions of nitrogen oxides and achieving the goal of having all areas in attainment for NO_2 by 2005. Over the next several years, the Agency will continue to work to maintain air at safe levels of NO_2. The Agency also will review the standard to assure that it continues to protect human health and welfare.

Because NO_2 is a tropospheric ozone precursor, control of NO_2 is a way to reduce ozone. As described in the preceding ozone section, efforts are underway to reduce the more pervasive nitrogen oxides in the acid rain and mobile source programs, encouraging market-based, low-cost pollutant trading. These programs will simultaneously address nitrogen oxides, tropospheric ozone, and fine particulate matter.

Lead

Exposure to lead mainly occurs through inhalation of air and ingestion of lead found in dust, food, paint, water, or soil. Lead accumulates in the body in blood, bone, and soft tissue. Because it is not readily excreted, lead also can affect the kidneys, liver, nervous system and other organs. Excessive exposure to lead may cause kidney disease, reproductive disorders, and neurological impairments such as seizures, mental retardation, and/or behavioral disorders. Fetuses and children are especially susceptible to low doses of lead, often suffering central nervous system damage or slowed growth.

Thanks largely to reduced use of leaded gasoline, human exposure to lead in ambient air has been greatly reduced. Today, smelters and battery plants are the major sources of lead in the air. EPA will continue a relatively low level of existing work, emphasizing the few nonattainment areas near smelters. Mandating the use of unleaded gasoline will continue to be

the most effective way to prevent airborne lead. Two additional areas are expected to come into compliance with the NAAQS in FY 2003.

Cross-Pollutant Operating Permits and New Source Review (NSR).

Following the promulgation of the Part 70 operating permit rules, EPA will provide technical support to Regions, states, Tribes and local agencies on permit program revisions. By the end of FY 2003, EPA intends, with assistance from state and local permitting authorities, to complete the first round of Part 70 permits. The Agency will continue to monitor the permitting program implementation efforts. The Agency will continue and expand training and technical support efforts to ensure smooth incorporation into operating permits of the Compliance Assurance Monitoring, Maximum Achievable Control Technology (MACT) standards, and other rules that have recently become effective. The Agency also will continue to be involved in and expand, as needed, efforts to reform and streamline permitting programs and train citizens to effectively review Title V and new source review (NSR) permits.

In FY 2003, the RACT/BACT/LAER Clearinghouse (RBLC) will continue to maintain, operate, and enter new information into its data base. In FY 2002 the RBLC will complete data collection and entry for missing permits issued in the last 10 years and implement most improvements identified through RBLC public workshops. The RBLC also will implement an on-line tutorial, establish an interface with EPA's public access GIS data base (to relate the proximity of permitted sources to Class I and other sensitive areas), and complete its first technical bulletins on new and emerging air pollution technologies in FY 2002. New initiatives are planned to be completed in FY 2003 to implement more complex system improvements, establish an emerging technology data base, accommodate final NSR Reform rules, and interconnect the RBLC Web data base with other EPA data bases that contain facility data.

The regulatory modeling program will be continued. This includes implementation of new modeling systems (e.g., AERMOD, PRIME, CALPUFF) to support NSR/PSD (Prevention of Significant Deterioration) applications. New standardized methods for evaluation of models and for QA/QC of model applications will be developed. Also, support and outreach to the air regulatory modeling community through Internet websites, Model Clearinghouse, training, and workshops will continue.

Homeland Security

In FY 2002, resources will be used to procure equipment that will allow EPA to do air monitoring in emergency situations. Resources will allow EPA to develop and maintain the capability to quickly provide relevant air pollution monitoring and health effects information in response to a terrorist incident. EPA equipment would supplement permanent state and local monitoring networks providing more comprehensive, site-specific information.

Research

EPA's NAAQS-related research program has a two-fold purpose: (1) to support the periodic review and revision as needed of the NAAQS (i.e., risk assessment, exposure, and

effects research); and (2) to support implementation and attainment of the NAAQS (i.e., atmospheric chemistry, air quality models, and risk management research). The FY 2003 request focuses on research to address the two NAAQS pollutants that are believed to pose the greatest risk to human health: tropospheric ozone and particulate matter (PM).

Tropospheric Ozone and Related NAAQS

Continuing research efforts in FY 2003 will develop measurement methods and observations-based assessments to provide a reliable means of determining state and local emissions reductions. EPA will develop techniques to measure ozone precursors and their transformation during meteorological transport. Ongoing regional field studies have been developing observation-based methods (OBM) to complement emissions-based, physical theory modeling (EBM). In FY 2003 methods to combine EBM and OBM techniques for developing ozone control strategies will be demonstrated, so that the Agency, states, Tribes, and the public can accurately and reliably predict ambient ozone concentrations.

In the area of atmospheric chemistry and modeling, EPA will examine the causes of NAAQS non-attainment (e.g., chemical constituents, sources and source regions, and meteorological variables). Research will also develop data about key missing features of the atmospheric chemistry of ozone formation and use these data to improve atmospheric chemistry models. Developing, evaluating, and applying atmospheric models for projecting the impacts of alternative control strategies will also continue to be a priority in FY 2003.

Research to improve the accuracy of emissions estimates from biogenic (i.e., naturally occurring) and mobile sources will continue in FY 2003. Biogenic emissions research will develop improved emissions factors for compounds that are highly reactive with ozone and hydroxide because current inventories may under represent these emissions. Field measurements will also be conducted to validate estimates of oxygenated volatile organic compound (OVOC) emissions from agricultural, arid land, and forest OVOC sources. Activity (such as land use) algorithms that influence these estimates will be studied to enhance the reality and accuracy of the estimates. Work will also be conducted to help determine how emissions change between seasons. Accurate estimates of emissions from biogenic sources are critical in estimating background oxidant potential and formulating cost-effective anthropogenic pollution control strategies.

Mobile emissions research will further the development and validation of the Mobile Emissions Assessment System for Urban and Regional Evaluation (MEASURE), which provides more accurate emissions estimates of CO, NO_x, and VOCs – ozone precursors. MEASURE takes into account how a vehicle's mode of operation, such as acceleration, influences emissions. Studies will be performed to enhance MEASURE's capability to estimate emissions from the Light Truck fleet (LDGT 1's and LDGT 2's) because the data used for these sources is limited. In addition, efforts will continue to integrate the MEASURE model into the MOBILE6 model now used by states to develop estimates for ozone SIPs. The data generated from this research will help federal, state, Tribal, and local regulators develop and evaluate attainment strategies.

Research activities related to NAAQS pollutants other than tropospheric ozone will include the development of an External Review Draft for the NOx AQCD as part of the periodic NAAQS review of this pollutant.

Particulate Matter Research

EPA's particulate matter research portfolio is aligned with the ten priority topics identified by the National Academy of Sciences (NAS) in a series of reports, the most recent issued in January 2001 (*Research Priorities for Airborne Particulate Matter: Early Research Progress*). The next report, due near the end of FY 2002, will provide the NAS, customers, and interested stakeholders with the opportunity to evaluate an extensive body of research results. The NAS recommendations describe a research program that would resolve issues of scientific uncertainty regarding (a) the science underlying the 1996 Air Quality Criteria Document for Particulate Matter, (b) our scientific knowledge regarding susceptible subpopulations and hazardous PM components, and (c) the implementation of the current PM standards. The EPA research plan also addresses several critical research issues which are included in multiple NAS topics. These include:

1. Potential confounding of PM health effects with other pollutants in the air. The EPA research program is sequenced such that much initial effort has gone towards identifying specific components of PM. Once health effects of specific components are determined, it will be possible to ascertain the contribution of other pollutants to health effects associated with PM and it components. This plan is in agreement with the NAS timeline for research on PM and co-pollutants. Although EPA is far from understanding the health effects associated with all PM components, enough progress has been made that EPA will now initiate studies formally examining the role played by co-pollutants. Epidemiologic research under this topic will assess the consequences of PM and co-pollutant exposures in at-risk populations including the relative toxicity of specific PM constituents from various emission sources and the role of gaseous co-pollutants (such as nitrogen dioxide and carbon monoxide) in PM health effects.

2. Attribution of the PM health effects to specific constituents (e.g., sulfates versus nitrates versus organic and elemental carbon, and metals). The new monitoring network, which includes the supersites and speciation sites, is providing information about specific PM components. Future epidemiology studies will associate health effects with these components. Current and planned toxicology studies are also linking health effects with specific PM components found in ambient PM, and attempting to further link specific components with sources that produced them in an effort to link health effects with pollution sources

3. The quantitative relationship between exposure to different particles and various health effects. The assessment of the hazards associated with PM has proceeded in line with the NAS Risk Assessment Paradigm of 1993. This paradigm initially establishes the existence of a hazard (i.e., Hazard ID) and its 'biologic plausibility,' and then ascertains the attributes of dose (concentration)-response. The preponderance of data to date correlates exposure to PM mass with many different health effects, including cardio-

respiratory mortality and morbidity, and life-shortening. Since these outcomes occur at levels previously thought to be "safe" a high priority must now be placed on establishing dose-response models in epidemiology and toxicology studies. Only with established dose (concentration) - response relationships between particles (and their components) with potentially adverse health effects, will appropriate and credible assessment of the true risks and impact to human health be determined.

NAS Priority Topic 1- *Outdoor measures vs. actual human exposures to PM*: As the NAS time line suggests, exposure related research in FY 2003 is moving from Topic 1 to Topic 2, measuring exposure to specific PM components.

NAS Priority Topic 2 - *Exposure of susceptible subpopulations to toxic PM components*: Research under this NAS Topic, as well as under NAS Topic 1, will investigate exposure of both the general population and susceptible subpopulations to PM and the components of PM suspected to pose the greatest health risks. Specifically, this research includes measurements to generate PM human exposure data and the development of modeling tools needed to estimate exposures to PM and its components. Work will continue to develop models that predict exposure, and to link these exposure models to atmospheric and lung deposition models.

NAS Priority Topic 3- *Characterization of PM emission sources*: This work will: (1) develop new or improved methods and models to quantify or estimate emissions; (2) provide data on the size distribution of the particles emitted; and (3) provide updated and augmented data on the chemical composition of PM from a variety of sources. Research on gaseous PM precursors will focus on improving ammonia emission factors for different types of animal husbandry operations (swine and poultry) and on-road light-duty vehicles. Ammonia emissions are currently not well quantified and air quality models require improved ammonia emissions data to accurately predict secondary PM formation both close to the sources of ammonia and farther downwind in more highly populated areas. This research will reduce uncertainties in emissions estimates and increase the likelihood that strategies in State Implementation Plans (SIPs) will achieve the emissions reductions required to comply with the NAAQS.

NAS Priority Topic 4 - *Air quality model development and testing*: EPA atmospheric measurement and modeling research in support of NAS Priority Topic 4 will evaluate the processes that control the chemical composition of PM and develop urban-to-regional scale emissions-based air quality models and source apportionment models. Additional research will be conducted to determine accurately the physical properties, chemistry, and composition of atmospheric aerosols and to develop and evaluate measurement methods needed for applying and evaluating complex models that simulate atmospheric processes. These efforts will increase understanding of atmospheric processes (including meteorology) and chemistry that affect the secondary formation, transport, and fate of PM to support NAAQS implementation planning, as well as the evaluation of alternative risk management options. Improved methodologies and models will allow us to do more accurate and complete analyses than currently possible.

NAS Priority Topic 5 - *Assess hazardous PM components:* EPA will determine physical, chemical, and biological characteristics (e.g., size, chemical composition) of particles responsible for adverse health effects, as well as dose-response relationships between PM

constituents and adverse health effects. This research will involve an integrated, multi-disciplinary approach in which emission characterization and health information will guide chemical speciation research. Well-characterized PM samples from sources of concern (oil and coal-fired boilers, diesel trucks, open burning) will be provided for toxicological testing. The emphasis of this research will be on simulating mixtures of PM that people are actually exposed to in the ambient environment in such a way that effects of specific PM components can be evaluated individually and in combination.

NAS Priority Topic 6 – Deposition and Fate of Particle in the Respiratory Tract: Because work in this area is focusing on the differences between normal and susceptible individuals, it has been merged with NAS Topic 8, Susceptible Populations.

NAS Priority Topic 7 - *Effects of PM and co-pollutants*: Continuing research efforts to understand and disentangle the effects of PM and co-pollutants include studies of interactions between PM and other air pollutants, as well as toxicological and clinical studies to investigate effects of co-pollutants on PM health effects. Additional research under this topic will include epidemiological studies to assess the consequences of PM and co-pollutant exposures in at-risk populations.

NAS Priority Topic 8 - *Identify susceptible subpopulations*: Health effects research will identify subpopulations with enhanced sensitivity to the adverse effects of PM and determine how host susceptibility factors influence dose-response relationships. This work will also develop animal models of human susceptibility and conduct studies identifying morbidity effects on vulnerable population subgroups. Dosimetry research continues to be a high priority area because recent studies have shown that PM is deposited in greater amounts, and in different pulmonary locations, in people with lung disease than in healthy people.

NAS Priority Topic 9 - *Toxicological mechanisms of injury*: Research will identify underlying mechanisms of toxicity responsible for adverse health outcomes. This research will also determine physical, chemical, and biological characteristics of particles responsible for adverse health effects.

NAS Priority Topic 10 - *Analysis and measurement*: Research will support development of methods for the use of alternative indicators of exposure to PM, which can be correlated with morbidity and mortality outcomes.

In FY 2003, EPA will also continue supporting five university-based research centers conducting particulate matter research. These research centers, established in FY 1999, advance the scientific understanding of the health effects of PM through integrated exposure and health effects studies addressing all ten high-priority research areas identified by the NAS. Research at these centers includes exposure studies, the development of dosimetry models, toxicological studies, and acute effects epidemiological studies.

In addition, EPA's PM research program will continue to coordinate activities in the Supersites monitoring network, which provides detailed air quality information to support atmospheric chemistry and modeling efforts, evaluation of new and emerging monitoring

methods, as well as toxicological and epidemiological studies that will support both future NAAQS decision-making and NAAQS implementation.

Finally, EPA's PM research program also includes support for the development of methods to measure PM and its components and to evaluate options to manage PM risks. This research will include support for the development of Federal Reference Methods (FRM) needed to implement the PM NAAQS and will investigate continuous monitoring methods for both PM mass and speciated PM.

FY 2003 Change from FY 2002 Request

EPM

- (-$600,000) Resources for the FY 2002 Homeland Security Supplemental, used for one-time equipment purchases, are not continued in FY 2003.

- (-$7,150,000) The FY 2002 Request is $7,150,000 below the FY 2001 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

- (-$764,900) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

STAG

- (-$6,500,000) Redirected state grant funds from the NAAQS program to the air toxics program to help states develop a national air toxics monitoring network.

S&T

- (-$5,100,000) The FY 2002 Request is $5,100,000 below the FY 2001 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

- (+$14,000,000) This increase is for the implementation of equipment upgrades required to accurately measure the emissions of Tier II vehicles and low-emission heavy-duty diesel engines. This level includes: (1) $8.5 million for emission measurement system upgrades required to fully implement and enforce the new Tier 2 emission standards and

test procedures for all passenger cars and light trucks beginning with the 2004 model year; (2) $3.0 million for emission measurement system upgrades required to develop the model year 2004 and 2007 Diesel Engine Standards and to subsequently implement and enforce these standards for all on-highway heavy-duty engines; and (3) $2.5 million for digital and computer-based emission measurement system upgrades required to accurately measure the next generation of emission control systems.

Research

S&T

- (+$3,580,300) Resources will be redirected within the Objective from long-term PM health effects studies supporting multiple NAS-identified high priority research topics to additional research focusing on the combined effects of PM and gaseous pollutants (NAS 7), and mechanisms of injury (NAS 9). Very little data is available on the actual mechanisms of PM toxicity. Research on the mechanisms of injury is needed to better understand the causal link between PM exposures and adverse health outcomes in support of risk assessments. In addition, most PM risk assessments currently address the effects of specific pollutants separately, and research on combined effects will allow for a more complete assessment of the human health risks associated with the direct effects of exposure to PM in combination with other air pollutants.

- (-$3,580,300) Resources will be redirected within the Objective from long-term PM health effects studies (multiple NAS research topics) to work focusing on combined effects of PM and gaseous pollutants, and mechanisms of injury. This multi-year program will continue to focus on assessing the health impacts of long-term exposures to PM and its constituents, and a substantial base remains to continue this program.

- (+$800,000) Resources will be shifted within the Objective to support Federal Reference Method (FRM) development. The current FRM is outdated and states have requested newer continuous monitoring technologies. Special emphasis is needed on a Federal Reference Method (FRM) for continuous sampling of PM, including coarse PM, development of speciation techniques, and resolution of issues related to pollutant speciation.

- (-$800,000) Resources will be shifted within the Objective to support FRM development. This research focused on field and modeling research on the generation and control of ozone, fine particles, and photochemical processes in the southern United States. The program was scheduled to expire in FY 2002.

- (+$658,800, +2.0 FTE) This change represents a shift of resources within the Objective from emissions characterization research for toxicology support (NAS 3) to increase support for state efforts to develop attainment strategies. This work will focus on PM source profiling and characterization for mobile sources (also NAS 3), including research to improve or develop new methods to quantify the size distribution and chemical composition of fine PM and gaseous precursor emissions from off-road sources.

- (-$658,800, -2.0 FTE) This shift of resources within the Objective will reduce resources for emissions characterization research (NAS 3) supporting PM toxicology work. There will be a modest delay in providing data for use in toxicology studies.

- (+$490,600, +6.9 FTE) Resources will be redirected within the Objective to PM exposure measurement and modeling (NAS 1& 2), including the development of exposure data and models to predict exposure. Planned research related to homeland security will conclude in FY 2002.

- (-$490,600, -6.9 FTE) Planned research related to homeland security in the area of health effects and exposures at the World Trade Center will conclude in FY 2002. Resources will be redirected to PM exposure measurement and modeling (NAS 1& 2).

- (+$400,000) This increase augments PM exposure measurements research (NAS 2) to provide data for PM mass and toxic components. The results from this research will be representative of the general population and selected subpopulations and will focus on areas that include quantifying the relationship between ambient measures and personal exposure, as well as directly quantifying the magnitude, frequency, and duration of exposure.

- (+$66,500, +0.3 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.

- (-$2,242,500) The FY 2003 Request is $2,242,500 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Annual Performance Goals and Measures

Reduce Ozone and Ozone Precursors

In 2003 Maintain healthy air quality for 44.1 million people living in monitored areas attaining the ozone standard; certify that 2 areas of the remaining 45 nonattainment areas have attained the 1-hour NAAQS for ozone thus increasing the number of people living in areas with healthy air by 1.0 million

In 2002 Maintain healty air quality for 41 7 million people living in monitored areas attaining the ozone standard; certify 10 areas of the remaining 55 nonattainment areas have attained the 1-hour NAAQS for ozone, thus increasing the number of people living in areas with healthy air by 2 5 million

In 2001 EPA maintained healthy air quality for 38.2 million people living in 43 areas attaining the ozone standard, increased by 3.5 million the number of people living in areas with healthy air quality that have newly attained the standard by certifying that 3 new areas have attained the 1-hour standard.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Total Number of People who Live in Areas Designated to Attainment of the Clean Air Standards for Ozone	41,679,000	44,146,000	45,167,000	People
Areas Designated to Attainment for the Ozone Standard	3	10	2	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the Ozone Standard	3,475,000	2,467.000	1,021,000	People
VOCs Reduced from Mobile Sources	1,659.000	1,755.000	1,852,000	Tons
NOx Reduced from Mobile Sources	1,189,000	1,319,000	1,449,000	Tons

Baseline: As a result of the Clean Air Act Amendments of 1990, 101 areas with a population of 140,015,000 were designated nonattainment for the 1-hour standard. Through 2001, 46 areas with a population of 41.7 million have been redesignated to attainment and 55 areas remain in nonattainment .(Population estimates based on 2000 census.) The 1995 baseline for VOCs reduced from mobile sources is 8,134,000 tons and 11,998,000 tons for NOx, both ozone precursors.

Reduce Particulate Matter

In 2003 Maintain healthy air quality for 7.2 million people living in monitored areas attaining the PM standards; increase by 81 thousand the number of people living in areas with healthy air quality that have newly attained the standard

In 2002 Maintain healthy air quality for 3:4 million people living in monitored areas attaining the PM standards, increase by 3 7 million the number of people living in areas with healthy air quality that have newly attained the standard.

In 2001 EPA maintained healthy air quality for 1.189 million people living in 9 areas attaining the PM standards and increased by 2.249 million the number of people living in areas with healthy air quality that have newly attained the standard.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Total Number of People who Live in Areas Designated in Attainment with Clean Air Standards for PM	3,438,000	7,181,000	7,262,000	People
Areas Designated to Attainment for the PM-10 Standard	8	6	8	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the PM Standard	2,249,000	3,743,000	81,000	People
PM-10 Reduced from Mobile Sources	22,000	23,000	25,000	Tons
PM-2.5 Reduced from Mobile Sources	16,500	17,250	18,000	Tons

Baseline: As a result of the Clean Air Act Amendments of 1990, 84 areas with a population of 31,114,000 were designated non-attainment for the PM-10 standard. Since that time, EPA has split Pocatella into 2 areas thereby revising the baseline to 85 with a population of 31,114,000. Through 2001, 17 areas with a population of 3.4 million have been redesignated to attainment. (Population estimates based on 2000 Census.) The 1995 baseline for PM-10 reduced from mobile sources is 880,000 tons and 659,000 for PM-2.5

Reduce CO, SO2, NO2, Lead

In 2003 Maintain healthy air quality for 52.7 million people living in monitored areas attaining the CO, SO2, NO2, and Lead standards; increase by 4.1 million the number of people living in areas with healthy air quality that have newly attained the standard.

In 2002 Maintain healthy air quality for 36 7 million people living in monitored areas attaining the CO, SO2, NO2, and Lead standards, increase by 16 million, the number of people living in areas with healthy air quality that have newly attained the standard.

In 2001 EPA maintained healthy air quality for 36 3 million people living in 56 areas attaining the CO, SO2, NO2, and Lead standards and increased by 418,000 the number of people living in areas with healthy air quality that have newly attained the standard.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Total Number of People Living in Areas Designated in Attainment with Clean Air Standards for CO, SO2, NO2, and Pb	36,721,000	52,725,000	56,732,000	People
Areas Designated to Attainment for the CO, SO2, NO2, and Pb Standards	9	8	15	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the CO, SO2, NO2, and Pb Standards	418,000	16,005,000	4,007,300	People
CO Reduced from Mobile Sources	10,672,000	11,002,000	11,333,000	Tons
Total Number of People Living in Areas with Demonstrated Attainment of the NO2 Standard	14,944,000	14,944,000	14,944,000	People

Baseline: For SO2, NO2, Lead, and CO, 107 areas with a population of 67,573,000 were classified as non-attainment or were unclassified in 1990 Through 2001, 65 of those areas with a population of 36.7 million have been redesignated to attainment (Population estimates based on 2000 census.) The 1995 baseline for mobile source emissions for CO was 70,947,000 tons

Air Quality Index

In 2003 The three year average of the total number of days nationwide that any city reports air quality index (AQI) values greater than 100 in the nation's 94 largest metropolitan areas will drop from 1,548 in 1997-1999 to 1,290 in 2001-2003, which is 3.7% of total days

In 2002 The three year average of the total number of days nationwide that any city reports air quality index (AQI) values greater than 100 in the nation's 94 largest metropolitan areas will drop from 1.548 in 1997-1999 to 1,393 in 2000-2002, which is 4 0% of total days

In 2001 Three year trend data not available until late 2002

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of Area Days Greater than 100	Data Lag	1,390	1,290	Area Days

Baseline. The AQI provides information on pollutant concentrations for ground level ozone (O3), particulate matter (PM-10), carbon monoxide (CO), sulfur dioxide (SO2), and nitrogen dioxide (NO2) Of these 5 pollutants, only 4 (CO, O3, PM-10, and SO2) generally contribute to the AQI value. Ozone contributes 98% of the AQI days over 100 due to ozone in 1999. The proposed measure is a three year running average of the total metropolitan statistical area days (msa-days) above an AQI value of 100 This averaging helps to account for the variability (upward and downward swings) associated with the significant effect of meteorology on this metric. Since 1993, the running 3 year average of AQI msa-days > 100 has fluctuated with a high of 1,586 for 1993-1995, a low of 1,414 for 1997-1999 and the mean of the average number of msa-days from the three year periods 1991-1993 through 1998-2000 at 1,490. This is a new measure for 2003, EPA will use the mean for the previous 7 three year periods (1,490) as its estimate for 2001 and targeted a reduction of 100 total msa-days each year through 2003

Research

PM Effects Research

In 2003 Describe health effects of PM and its components in normal and susceptible populations, mechanisms by which PM exerts adverse health effects, and analyze ambient and personal exposure to PM so that EPA has the necessary information to develop NAAQS that protect human health

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

In 2001 EPA provided new information on the atmospheric concentrations, human exposure, health effects and mechanisms of toxicity of particulate matter.

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Complete PM longitudinal panel study data collection and report exposure data	1			study
Report on health effects of concentrated ambient PM in healthy animals and humans, in asthmatic and elderly humans, and in animal models of asthma and respiratory infection.	1			report
Final PM Air Quality Criteria Document completed	0			final AQCD
Report on the effects of concentrated ambient PM on humans and animals believed most susceptible to adverse effects (e g , elderly, people with lung disease, or animal models of such diseases)		1		report
Publish report on effects of particulate matter and volatile organic chemical air pollutants on children		1		report
Publish report on the empirical and theoretical lung deposition dose of ultrafine, fine, and coarse particles in elderly and mild asthmatic subjects under various breathing conditions.			1	report
Publish report on the toxic effects of metallic and ultrafine PM constituents on lung cells and animals, and the molecular and biochemical mechanisms through which they occur		1		report
Publish report on a series of studies of model and ambient PM effects in animal models of systemic hypertension, advanced cardiovascular disease, and chronic lung disease (asthma, COPD)		1		report
Report on animal and clinical toxicology studies using Utah Valley particulate matter (UVPM) to describe biological mechanisms that may underlie the reported epidemiological effects of UVPM		1		report
Longitudinal PM exposure panel study final report		1		report
Complete 3rd External Review Draft for the PM AQCD for public comment and CASAC review		1 draft		report
Report on statistical associations of mortality/morbidity with source categories and other alternative indicators of PM exposure		1		report
Capstone report on the physical, chemical, and toxicological characteristics of PM from heavy oil and coal combustion The report provides data on the linkage between emissions and health effects		1		report
Describe the relative importance of PM attributes (physical, chemical, and biological) on health outcomes in laboratory animals and humans.			1	evaluation
Ascertain attributes of susceptibility contributing to the responsiveness of cardiovascular- and pulmonary-compromised humans and laboratory animals.			1	analysis
Describe biochemical and neurogenic mechanisms by which PM modulates cardiovascular, hematological, and pulmonary functions			1	evaluation
Report on the acute respiratory health effects of particulate matter and co-pollutants among asthmatic children in seven U.S communities.			1	report

Baseline: At present, there is substantial evidence from epidemiological studies that increased levels of particulate matter (PM) are associated with increased frequency of death and disease, especially in the elderly, in individuals with cardiopulmonary disease, and in children We still do not understand which PM components are responsible for increased mortality and morbidity, nor do we fully understand whether personal exposure to PM is reflective of exposure information obtained from fixed site monitoring Our understanding of the biological mechanisms underlying these associations, and a fuller understanding of populations which may be susceptible to PM are also only now beginning to emerge As noted by the National Research Council, the EPA research program is well targeted to address these critical knowledge gaps and is well integrated with the extensive ambient air monitoring programs managed by state and local agencies. The results of the research efforts in 2003 will include development

and application of new methods for assessing human exposure, identifying susceptible populations and major PM components responsible for toxicity, and characterizing mechanisms of toxicity leading to PM health effects, all of which will yield an improved scientific basis for setting National Ambient Air Quality Standards (NAAQS) for PM.

PM Measurement Research

In 2003 Provide updated data on PM source emissions, technology costs and performance, and air quality models so that States will have improved PM emissions inventories and compliance strategies for attaining the PM NAAQS and safeguarding public health

In 2001 Provided new information on particulate matter source emissions, measurements, methods, and emissions-based air quality models to guide State Implementation Plan (SIP) development under the PM NAAQS

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Publish a report on the size distribution of particles emitted from diesel trucks under various on-road conditions to improve source inventories for NAAQS implementation.	1			report
Publish peer reviewed documentation of the PM components of Models-3/CMAQ.	1			documentation
Prepare a report evaluating a new PM control technology, electrostatic fabric filtration, for use on coal-fired boilers.			1	report
To support the OAR PM regulatory program, produce a paper on emissions of ammonia from hog waste lagoons, both before and after application of mitigation techniques.			1	paper
Complete analysis of organic compounds in PM samples from combustion sources. Data will be used to update an OAR database used by states to determine sources of ambient PM			1	compendium

Baseline: There are existing databases, measurement methods, models, and other tools used to support decisions concerning implementation of the NAAQS for PM. Recent scientific advances and proposed changes to the PM standard require additional research to update and validate the existing tools and to develop new tools. While much is known about the emissions and concentrations of sulfur oxides and nitrogen oxides that contribute to formation of PM in the ambient air, less is known about other variables such as emissions of ammonia and directly emitted PM, how to measure the organic and elemental fractions of PM, and the myriad atmospheric reactions that lead to PM formation. Improvements are needed to measure various PM components at high time resolution and better specificity and to determine the physical properties of PM including size fractions and composition in ambient monitoring networks. Improvements are also needed to better understand the effect of meteorological parameters and other factors that may bias the measurements. Studies to validate and upgrade emission based and receptor models are also needed to ensure these tools produce the best results possible to support NAAQS compliance decisions. Key needs include studies to validate PM concentrations generated by the model against actual field measurements, improved data on the composition of directly emitted PM to identify unique tracers that relate emissions from a specific source, and improvements in our understanding of PM formation in clouds and fogs and transport processes at the surface and aloft to upgrade model algorithms that calculate atmospheric PM formation. Finally, as new PM and multi-pollutant control technologies are developed, technical and economic assessments are needed to assess their viability. Federal, state, and local air quality officials will use the upgraded models, methods and other tools to design and implement existing and new PM and visibility standards.

Verification and Validation of Performance Measures

Performance Measures: **NAAQS**

- Areas Designated for the 1-hour Ozone Standard and Associated Populations
- Areas Redesignated/ Areas Maintaining Healthful Standards for CO, SO2, NO2, and Lead and Associated Populations
- Areas Designated for PM 10 Standard and Associated Populations

Performance Databases:

- AIRS- Aerometric Information Retrieval System is comprised of two major subsystems: 1) the Air Quality Subsystem (AQS) stores ambient air quality data (used to determine whether nonattainment areas have the three years of clean air data needed for redesignation), and 2) the Airs Facility Subsystem (AFS) stores emissions and compliance/enforcement information for facilities.

- FREDS-The Findings and Required Elements Data System is used to track progress of states and regions in reviewing and approving the required data elements of the State Implementation Plans (SIP). SIPs define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards.

Data Source:

- AIRS: State and local agency data from State and Local Air Monitoring Stations (SLAMS).

- FREDS: Data are provided by EPA's Regional offices.

QA/QC Procedures:

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

- FREDS: No formal QA/QC procedures.

Data Quality Review:

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

Data Limitations:

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

- FREDS: Potential data issue is incomplete or missing data from Regions.

Data issues are all subject to the QA/QC procedures listed above and therefore are resolved or accounted for depending on how the data will be used.

New/Improved Data or Systems:

- AIRS: AQS, which stores ambient air quality data from over 5000 sites across the country, is a user-friendly, Windows-based Oracle relational database. State and local

agencies routinely upload air quality data to AQS on a quarterly basis, which the public can access through the web. Fiscal Year 2002 efforts will begin the process of moving AQS from a client-server application to a web application, allowing agencies to submit data to AQS via the Agency's Central Data Exchange (CDX). AFS, a mainframe system that the Office of Air Quality Planning and Standards (OAQPS) used for many years for managing its national emissions database has been replaced by the National Emissions Trends (NET) database. NET is an ORACLE database accessible through the Internet. Both systems will be enhanced to include the data standards (*e.g.*, latitude/longitude, chemical nomenclature) developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification standards will be included so that air emission data in the NET database can be linked with environmental data in other Agency databases for the same facility.

- FREDS: None

Performance Measure: **Reductions in Mobile Source VOC Emissions and Reduction in Mobile Source NOx Emissions**

Performance Database: AIRS

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

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

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

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

Data issues are all subject to the QA/QC procedures listed above and therefore are resolved or accounted for depending on how the data will be used.

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

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

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

New/Improved Data or Systems: AIRS: AQS, which stores ambient air quality data from over 5000 sites across the country, is a user-friendly, Windows-based Oracle relational database. State and local agencies routinely upload air quality data to AQS on a quarterly basis, which the public can access through the web. Fiscal Year 2002 efforts will begin the process of moving AQS from a client-server application to a web application, allowing agencies to submit data to AQS via the Agency's Central Data Exchange (CDX). AFS, a mainframe system that the Office of Air Quality Planning and Standards (OAQPS) used for many years for managing its national emissions database has been replaced by the National Emissions Trends (NET) database. NET is an ORACLE database accessible through the Internet. Both systems will be enhanced to include the data standards (*e.g.*, latitude/longitude, chemical nomenclature) developed under the Agency's Reinventing Environmental Information (REI) Initiative. Facility identification

standards will be included so that air emission data in the NET database can be linked with environmental data in other Agency databases for the same facility.

Performance Measure: **Reductions in Mobile Source PM 10 Emissions and PM 2.5 Emissions**

Performance Database: AIRS

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

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

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

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

Data issues are all subject to the QA/QC procedures listed above and therefore are resolved or accounted for depending on how the data will be used.

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

most recent year, to avoid a sudden discontinuity in the apparent emissions trend. EMD publishes the national emission estimates in hardcopy; county-level estimates are available electronically.

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Coordination with Other Agencies

EPA cooperates with several other Federal, state and local agencies in achieving goals related to ground level ozone and PM. EPA continues to work closely with the Department of Agriculture and the Forest Service in developing its burning policy and reviewing practices that can reduce emissions. EPA, the Department of Transportation (DOT), and the Army Corps of Engineers work with State and local agencies to integrate transportation and air quality plans, reduce traffic congestion, and promote livable communities. EPA continues to work with the Department of the Interior, National Park Service, in developing its regional haze program and deploying the IMPROVE visibility monitoring network. The operation and analysis of data

produced by the PM monitoring system is an example of the close coordination of effort between the EPA and State and Tribal governments.

EPA is working with the National Aeronautics and Space Administration (NASA) on technology transfer for using satellite imagery for pollution assessments and transports. We work with the Department of the Army, Department of Defense, on advancing emission measurement technology. We also work with the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, for meteorological support for our modeling and monitoring efforts.

The Department of Energy (DOE) and DOT fund research projects to better understand the size, source, and causes of mobile source pollution. The DOT's mobile source projects include TRANSIMS (TRansportation ANalysis and SIMulation System) and other transportation modeling projects; DOE is funding these projects through the National Renewable Energy Lab. EPA also works closely with the DOE on refinery cost modeling analyses for EPA's clean fuel programs. For mobile sources program outreach, the Agency is participating in a collaborative effort with DOT's Federal Highway Administration and the Federal Transit Administration designed to educate the public about the impacts of transportation choices on traffic congestion, air quality and human health. This community-based public education initiative also includes the Centers for Disease Control. In addition, EPA is working with DOE to identify opportunities in the Clean Cities program. We will also work with other Federal agencies such as the U.S. Coast Guard on air emission issues.

Research

Tropospheric Ozone Research Program. Other than Criteria Document preparation, which is EPA's responsibility alone, the Agency's core tropospheric ozone research program is coordinated with other agencies' research efforts, including the Departments of Energy and Commerce, and the National Science Foundation, and planned to achieve the most important overarching unmet research needs that draw upon EPA's expertise. All exposure and risk management research in this area is coordinated through the efforts of the North American Consortium for Atmospheric Research in Support of Air Quality Management (NARSTO), a public/private partnership whose membership spans governments, utilities, industry, and academia throughout Mexico, the United States, and Canada.

Particulate Matter Research Program. The National Academy of Sciences PM research plan serves as the principal guideline for EPA's PM research program. EPA coordinates with other Federal agencies (e.g., the National Institutes of Health and the Department of Energy) to review ongoing PM research activities and, where appropriate, re-focus activities so as to be consistent with the NAS plan. The EPA has chosen to take a broad-based approach to PM research planning and program development, which includes participation by the private sector.

The PM science planning community has pointed to the need to conduct its health effects, exposure, and monitoring research in close coordination, so that PM toxicological, epidemiological, and exposure research are done in combination. EPA will continue to focus on such coordination and pursue a number of avenues to achieve public/private coordination and cooperation, including: (1) playing a lead role in coordinating all Federal agency research on PM

health, exposure, and atmospheric processes under the Air Quality Research Subcommittee of the President's Committee on Environment and Natural Resources (CENR/AQRS); (2) creating an open inventory of all public and private ongoing PM research; and (3) completing a Research Strategy for PM which will benefit all organizations engaged in PM-related research.

One key opportunity for coordinating research supporting State efforts to implement the PM NAAQS is through the expansion of NARSTO, which has broadened its mission to include PM-related efforts. Complementary Federal/private coordination of effects-related research is under development, including that of the CENR/AQRS, and is being closely coordinated with the NARSTO expansion.

Statutory Authorities

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

Motor Vehicle Information and Cost Savings Act and Alternative Motor Fuels Act of 1988 (AFMA)

National Highway System Designation Act

Research

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Clean Air

Objective: Reduce Air Toxics Risk

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Reduce Air Toxics Risk	**$101,548.2**	**$114,658.9**	**$118,023.2**	**$3,364.3**
Environmental Program & Management	$48,479.1	$56,402.2	$56,913.9	$511.7
Science & Technology	$25,785.4	$27,466.3	$23,818.9	($3,647.4)
State and Tribal Assistance Grants	$27,283.7	$30,790.4	$37,290.4	$6,500.0
Total Workyears	377.7	375.2	371.4	-3.8

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$185.5	$0.0	$0.0	$0.0
Air Toxics Research	$19,077.0	$18,923.4	$19,883.7	$960.3
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$29,877.0	$30,790.4	$37,290.4	$6,500.0
Congressionally Mandated Projects	$3,161.7	$4,095.0	$0.0	($4,095.0)
EMPACT	$309.7	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$4,288.9	$5,430.0	$5,249.3	($180.7)
Hazardous Air Pollutants	$53,290.2	$52,225.3	$52,622.4	$397.1
Homeland Security	$0.0	$353.5	$0.0	($353.5)
Legal Services	$1,462.7	$1,552.6	$1,713.0	$160.4
Management Services and Stewardship	$620.1	$1,288.7	$1,264.4	($24.3)

FY 2003 Request

Toxic air pollutants, also known as hazardous air pollutants (HAPs), pose significant risks to public health by causing cancer and other serious health problems, such as reproductive disorders, birth defects, and damage to the nervous system. People who live near certain major industrial plants may face even higher risks.

The Clean Air Act Amendments of 1990 list 188 HAPs that are emitted from a variety of sources including: mobile sources, major stationary sources, and area stationary sources. Emission rates vary across sources and by locale. For example, the 1996 National Toxics Inventory indicates that mobile sources account for approximately 45 percent of the total air toxic emissions in urban areas, and that stationary sources make up the remaining 55 percent. For several individual air toxics (e.g., benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and diesel particulate matter), mobile sources may contribute from 50 to70 percent of the total inventory.

The 1990 Amendments contain a variety of provisions that address air toxics from all categories of sources. Title II of the Amendments calls on EPA to develop standards to control HAPs from motor vehicles and vehicle fuels. Vehicle and fuel standards must reflect the greatest degree of emission control that is technologically feasible, taking into account lead time, cost, noise, energy, and safety factors. Title III of the Amendments lists the 188 HAPs and requires EPA to develop Maximum Achievable Control Technology (MACT) standards for major stationary sources of these pollutants. Within eight years after promulgating the MACT standards, EPA must evaluate the residual risk posed by the sources and promulgate additional, risk-based standards, if needed, to provide an ample margin of safety to protect public health and the environment or to prevent, taking in consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

Title III of the Amendments also requires EPA to develop a national urban air toxics strategy that achieves mandated cancer and non-cancer risk reduction goals, to identify at least 30 hazardous air pollutants that present the greatest risk in urban areas, to develop MACT or Generally Available Control Technology (GACT) standards for area sources that emit those 30 or more pollutants, and to encourage and work with state and local air pollution programs to reduce risks in urban areas. In addition, the Clean Air Act Amendments require EPA, through the Great Waters Program, to study the effect of air toxics on ecosystems, particularly important water bodies. Finally, Title III mandates control of air toxics from combustion sources and analysis of emissions from fossil-fueled electric utilities.

To meet Clean Air Act requirements, EPA carries out an integrated air toxics program that includes: characterizing the air toxics problem through air monitoring, emission inventories, and the National Air Toxics Assessment (NATA); reducing air toxics emissions through developing and implementing Federal source-specific and sector-based standards; addressing multi-media and cumulative risks through national, regional, and community-based initiatives; and providing public education and outreach.

EPA now is close to completing the first, technology-based phase of the air toxics program and is moving to the second, risk-based phase. The second phase focuses on mobile and stationary source emissions that affect urban areas and large water bodies and the health and environmental risks that remain after the first-phase controls are in place. In this second phase, the Agency will:

- Monitor and characterize air toxics problems and identify the mobile and stationary sources of the most toxic chemicals that are transported through the air and affect cumulative exposure, particularly in urban areas and major water bodies.

- Continue to implement strategies to reduce health and ecological risks from air toxics, targeting urban areas and major water bodies where exposure to and risks from air toxics are the greatest.

Characterizing Air Toxics

For FY 2003, EPA will continue to invest in improved and innovative monitoring and modeling, emissions inventories, and risk assessment tools to better characterize urban and local scale problems and to address multi-media issues and multi-pathway exposures. EPA now is completing development of information and tools to broadly characterize the air toxics problem on a national scale and measure progress in improving public health and reducing environmental effects. For example, the Agency has developed a modeling tool to combine the emission estimates of stationary, mobile, and area sources and project future emissions that account for economic growth. These efforts will allow the Agency to better characterize the risks from air toxics and to establish a baseline for measuring changes in risk, as the Agency carries out the Government Performance and Results Act (GPRA) requirements to assess progress in meeting national goals. This work also will aid in future efforts to characterize and quantify the benefits of air toxics program activities.

EPA is working with states, Tribes, and local agencies to create a national monitoring and inventory program that better characterizes public exposures to hazardous air pollutants. In general, existing monitoring programs measure concentrations of only a limited number of toxic compounds and only at limited locations. EPA is continuing to work with other agencies to expand air toxics monitoring, particularly in urban areas and around major water bodies. A major investment is requested in this area. The Agency will establish a centralized database on toxic compounds in urban areas including in air, water, and solid waste; and update and improve the air toxics emission inventories. In addition, the Agency is establishing and updating databases for toxics deposition, and supporting deposition monitoring studies. Finally, EPA is working with the Department of Defense (DOD) and the Department of Energy (DOE), to evaluate and advance the development of new and improved continuous source monitoring technology for emissions of air toxics.

EPA will refine ongoing work with urban risk models to better estimate the human exposure to air toxics through various media and the risk to the public resulting from this exposure. As a first step, EPA developed a national-scale air quality model, the Assessment System for Population Exposure Nationwide (ASPEN). The 1996 National Air Toxics

Assessment (NATA) uses the ASPEN model with a more detailed emission inventory for the year; evaluates the model with expanded ambient monitoring information; and integrates an exposure model, the Hazardous Air Pollutant Exposure Model (HAPEM), to better assess public health effects. The application of ASPEN and HAPEM provides one basis for evaluating the effectiveness of the nation's air toxics programs. In FY 2003, EPA will update NATA with a 1999 emissions database using the ASPEN model for 33 pollutants. In response to comments from the Science Advisory Board, the Agency will implement enhanced methods for identification of more sensitive pollutants. Also, the Agency will complete analyses to document the uncertainty and variability associated with NATA inputs and models and their effects on risk estimates and characterizations. The uncertainty and variability analysis will be coordinated with relevant state agencies.

In FY 2003 EPA plans increased data collection efforts focusing on local hot spots and providing support in environmental justice issues. The Agency will evaluate and improve local-scale modeling efforts to support local evaluations and try to make them more resource efficient. EPA also plans to model air deposition emissions on a national scale using REMSAD (Regulatory Modeling System for Aerosols and Deposition). The output from this assessment will be used to provide information to other programs, including states, that can then use the information in evaluating options for air toxic emissions reductions.

In FY 2003, EPA will make further progress in linking release and exposure information from the various media programs to estimate multi-media toxics exposure and to develop cross-media strategies to more effectively reduce urban exposures to toxic emissions. One of the tools that is being developed to aid EPA in estimating multi-media exposures and risk is the Total Risk Integrated Methodology (TRIM). TRIM is designed, in response to scientific recommendations and Agency guidelines and policies, for the evaluation of health and environmental from air toxics and criteria pollutants. In FY 2003, the Agency expects to use TRIM to evaluate the residual risk for certain pollutants. The intent is that public release be accompanied by updated documentation and guidance for users. EPA will continue to identify patterns in exposures to air toxics to develop more effective strategies.

In FY 2003, EPA will develop guidance materials and training for Consolidated Emissions Reporting (CERR) for HAPs. The Agency will work with partners to develop improved emission factors. This effort will include gathering improved activity databases and use of geographic information systems (GISs) and satellite remote sensing, where possible, for key point source, area source, combustion, and fugitive dust source categories, and global emission events. EPA will coordinate with stakeholders on the development of a real time data system to catalogue wildland fire events and improve emission models for these fires.

The Agency also will continue to evaluate health testing results and protocols from the motor fuels industry to increase information on public health risks. The Fuels and Fuel Additives Registration (FFAR) program will provide for the review and screening of potential toxic substances, prior to introduction into motor vehicle fuel supplies. The FFAR program will continue involving approximately 2,000 fuel manufacturers, 3,000 gasoline and diesel fuel registrations, and 6,000 additive registrations. Approximately 10,000 registration reports will be

submitted. EPA will continue fuel additive health testing activities for Methylcyclopentadienyl Manganese Tricarbonyl (MMT) and Methyl Tertiary-Butyl Ether (MTBE).

In support of EPA regulatory efforts under Title II of the Act, the Agency will continue to assess the need for and the feasibility of further controlling emissions of toxic air pollutants associated with motor vehicles and fuels. In FY 2001, EPA issued a rule to address emissions of air toxics from mobile sources. This program identified 21 mobile source air toxics, which include several volatile organic compounds and metals, as well as diesel particulate matter and diesel exhaust organic gases. The rule evaluated the effectiveness of existing mobile source emission control programs in reducing highway emissions of the identified mobile source toxics. The analysis showed that significant reductions of mobile source air toxics are expected from existing programs that reduce ozone and particulate matter (PM), including: the reformulated gasoline program, the national low emission vehicle program, the emission standards for passenger vehicles and gasoline sulfur control requirements (Tier 2), and the 2007 heavy-duty vehicle standards and diesel fuel sulfur control requirements.

Because the Agency recognizes that additional research and evaluation are needed to fully understand the extent of the mobile source air toxics problem, the rule established a Technical Analysis Plan that outlines our plans for additional research into toxics emissions from nonroad vehicles and equipment, estimation of exposure in microenvironments, consideration of the range of total public exposure to air toxics, and effectiveness and costs of control measures. This research will inform a future rulemaking, to be completed no later than July 1, 2004, in which EPA will revisit the feasibility and need for additional controls for nonroad and highway engines and vehicles and their fuels. To prepare for this review, in FY 2003 EPA will continue gathering emissions data, conducting exposure analyses, and evaluating the need for additional control. These activities will contribute to an improved characterization of the mobile source air toxics problem, as well as the continued enhancement of emissions and exposure models.

Reducing Emissions and Risk from Stationary and Mobile Sources

Under Title III of the Clean Air Act Amendments, EPA has completed all of the two-year, four-year, and seven-year MACT standards. Through September 2001, the Agency has proposed twenty-one and promulgated four (of the total 53 standards covering 94 source categories) 10-year standards. Once fully implemented by the states, the MACT standards, including those yet to be completed, are expected to reduce air toxics emissions by some 1.5 million tons per year and reduce risks to the public for cancer and other serious health problems.

In FY 2003 and FY 2004, EPA will focus its efforts on completing the remaining 10-year MACT standards. To date, the Agency has delisted five MACT standards, and has finalized four MACT standards. Current Agency plans are to finalize 13 MACT standards in FY 2002, 19 in FY 2003, and 12 in FY 2004. EPA expects to have all but 9 MACT standards proposed by May 2002. The states and industry can use the proposed standard, or presumptive MACT, as boilerplate language to prepare and approve permit applications.

In FY 2003, EPA also will be working on implementing, delegating, and addressing issues such as process changes that may result in amendments to promulgated MACTs. EPA

believes that Federal standards for controlling emissions of HAPs from area and major stationary sources are most effectively implemented by states, Tribes, and local agencies. EPA delegates its implementation authority and provides tools and guidance to ensure smooth and consistent implementation. EPA will publish guidance, provide support in issue resolution, and conduct outreach activities to help sources comply. To this end, EPA will use emissions testing and, where feasible and cost-effective, continuous emission monitoring to measure compliance with MACT and other air toxics standards. EPA also will develop capabilities for greater community right-to-know access (e.g., using the Internet) to air toxics data.

In FY 2003, EPA will continue the extensive residual risk analyses for already promulgated MACT standards to determine if additional standards are necessary to reduce the remaining health and environmental risks from these sources. For those source categories where EPA determines that additional control is needed, the Agency will then develop residual risk standards. To determine whether additional standards are needed requires significant data and analyses to determine the residual risks (emissions, source characterization, exposures, etc.) as well as potential control options for reducing the risks.

EPA currently is working on risk assessments to help with residual risk decision making for eight source categories. An EPA decision on the first category, coke ovens, is expected early in calendar year 2002 with decisions for an additional six categories coming due in FY 2002. Decisions on nine more source categories will be due in FY 2003, and EPA will be initiating assessment activities for these in the next few months. EPA plans to refocus resources from the MACT program to support these assessment activities.

In addition to these standards, EPA determined in December 2000 that regulation was necessary and appropriate for coal- and oil-fired electric utility steam generating units. According to the existing settlement agreement, EPA will propose these regulations in December 2003, and promulgate them in December 2004. Section 129 of the Clean Air Act, as amended in 1990, also requires the establishment of performance standards for four categories of waste incinerators: municipal waste combustors (MWC); health, infectious, medical waste incinerators (HIMWI); commercial and industrial waste incinerators (CISWI); and other solid waste incinerators (OSWI). The large MWC category reached compliance in December 2000, and the small MWC and CISWI regulations were promulgated in 2000. Regulations for HIMWI are currently in remand from the D.C. Circuit Court, and OSWI regulations are due in November 2005. Currently, the Agency is being litigated on the MWC, CISWI, and OSWI regulations. The Agency will be taking a voluntary remand on CISWI to address the issues in the current and previous litigations. The Federal Plans for small MWC units was proposed in FY 2001; the final is planned for FY 2002. The Federal Plan for CISWI units is scheduled for proposal in late FY 2002 with final promulgations planned for FY 2003. In the July 2001 Sierra Club suit, EPA is also cited for failure to meet the requirement to review and revise the MWC rule within five years. In FY 2003, EPA will propose MACT regulations for steam generating units and will continue to develop responses for ongoing litigation on the section 129 regulations.

The Integrated Urban Air Toxics Strategy, released in 1999, identified the HAPs that pose the greatest threat in the largest number of urban areas and the area source categories that emit these pollutants. EPA must assure that 90 percent of air toxic emissions from urban area

sources are subject to regulation. The strategy contains a schedule of activities to: substantially reduce non-cancer health risk; reduce cancer incidence by 75 percent; focus on disproportionate risk; reduce mobile source emissions contributions; and encourage state, local, and Tribal programs to develop strategies for their communities. EPA is working on an initial list of 13 source categories which address some of the largest emission sources. When the list is finalized to meet the 90 percent requirement, it may contain more source categories.

In FY 2003, EPA will continue to develop the state, local, and Tribal component of the strategy so that these entities can address emission issues that are of concern on a state-wide, area-wide, or community-wide basis. In addition, EPA will continue to support community assessment and risk reduction projects. First, the Agency will provide information to states and communities through case examples, documents, websites, and workshops on tools to help them in conducting assessments and identifying risk reduction strategies. Second, the Agency will compile and analyze the information from local assessments and use it to better characterize risk and assess priorities for further action. The Agency will then complete its reassessment of the area source category list and begin development of urban area source standards. Area source standards will be developed for hazardous air pollutants judged to pose the greatest threat to public health in the largest number of urban areas.

EPA's existing engine certification, compliance, and fuel quality requirements will continue to provide reductions of toxic air pollutants as well as criteria air pollutants. Under these requirements, engine/vehicle manufacturers are required to certify that any engine/vehicle entered into commerce in the U.S. meets the emission limits set by EPA. Fuel refineries demonstrate compliance by submitting survey data to EPA. In addition to these implementation requirements many state and local agencies supplement these requirements with vehicle inspection and maintenance programs and local fuel testing.

EPA will continue its efforts to address and prevent adverse effects of atmospheric deposition of toxics and nitrogen compounds in the Great Waters. This work involves collaboration within EPA offices and with the National Oceanic and Atmospheric Administration (NOAA). In FY 2003, EPA will continue to implement, and will revise as needed, the air/water interface work plan, a framework for the EPA's air and water offices to address air/water issues. Efforts in this work plan include the development and support of multi-media regulatory approaches to reduce risk and achieve water quality standards, such as enhancing technical tools and developing demonstration projects that facilitate Federal, state, Tribal and regional deposition reduction strategies. For example, EPA will analyze national scale modeling assessments of deposition, taking into account the recent inventory and air rules, to determine where additional reductions may be necessary to address the remaining risk and water quality concerns. EPA also will provide up-to-date information regarding air deposition through education and outreach efforts. These include synthesizing current trends information and sponsoring workshops and conferences.

During FY 2003, EPA will continue work begun in FY 2001 to evaluate CAFOs in an effort to characterize the industry, identify sources of air emissions and control practices, and estimate air emissions. In conjunction with the U.S. Department of Agriculture (USDA), the Agricultural Air Quality Task Force (AAQTF), and other stakeholders, EPA will develop a 4- to

5-year research plan to collect information necessary to implement these various approaches. In FY 2003, EPA will conduct studies and gather data to carry out the research plan.

In 2001 the Inspector General completed a report concerning EPA's actions to address the asbestos exposure to citizens in Libby, Montana. The exposure to asbestos in Libby was a result of the mining of asbestos contaminated vermiculite. One of the recommendations from the Inspector General was for the Agency to consider the need for regulation of contaminant asbestos under the Clean Air Act through a National Emission Standard for Hazardous Air Pollutants (NESHAP). As a first step in implementing this recommendation, EPA will produce an Asbestos Action Plan in FY 2002. The Action Plan will outline the steps necessary to determine if a NESHAP is necessary for ores contaminated with asbestos. The implementation of the plan will continue into FY 2003 regarding decisions on the need for a NESHAP. If a NESHAP is necessary, then work in this area will continue for several years as the NESHAP is developed.

Finally, as part of its reinvention efforts, the Agency will continue to investigate opportunities for coordinated data gathering and rulemaking efforts considering releases across media and pollution prevention opportunities. EPA will bring together ongoing efforts such as the Persistent Bioaccumulative Toxics (PBT) program to develop and implement national action plans for priority pollutants, and continue to develop integrated strategies to reduce toxics for major area and mobile sources.

Research

For FY 2003, the focus of air toxics research will be on risks humans experience from exposures to hazardous air pollutants (HAPs) from both outdoor (mobile, point, and area) and indoor sources. The primary goal of this research is to improve the Agency's capability to support future national, regional, and local scale assessments of air toxic sources, exposures and risks to human health. This research will lead to an improved understanding of the activities and factors that affect human exposure, the development of dose-response information necessary to determine health effects from individual HAPs, mixtures of HAPs, and to identify and determine the risks of HAPs exposures to susceptible populations. Thus, air toxics research will include an emphasis on understanding cumulative risks resulting from exposures to HAPs from varied sources.

Research will continue to improve techniques to characterize HAPs emissions from outdoor and indoor sources, and identify innovative low-cost approaches to control or prevent emissions. Ongoing studies are being conducted to refine estimates of toxic emissions from all classes of highway vehicles, and to improve the techniques used to measure emissions from point and area (dispersed) sources. Additional studies are developing an improved understanding of chemical reactions between toxic pollutants in the indoor environment and developing improved methods and models to quantify sources of indoor HAP emissions.

Research will also continue to focus on improving our understanding of how HAPs are formed and can be prevented in industrial and combustion processes and how to appropriately measure these emissions on a continuous basis. The emissions data produced by this research

will be incorporated into multi-media human exposure models and air quality models used to evaluate potential implementation strategies. Information on risk management options will support development and implementation of future urban HAPs regulations, and compliance with any residual risk standards.

Continuing health effects research will characterize exposure-dose-response and health effects of HAPs through the development of biomarkers, modes-of-action information, and models. This research supports the reduction of large uncertainties in quantitative estimates of the health effects of HAPs compounds by developing models to extrapolate from animals to humans, and from studied HAPs to less understood HAPs that react in a similar manner. The range of health effects of high priority HAPs and their mixtures (including VOCs and mobile source-related pollutants) will be determined under various exposure scenarios. Health effects methodology work will focus on high priority urban HAPs including fuel and fuel additives, and indoor pollutants.

Research in air quality modeling will expand the Models3/Community Multiscale Air Quality (CMAQ) modeling system to include specific HAPs and will continue to develop neighborhood scale modeling capabilities to support urban and local scale assessments. To improve the fate and transport component of EPA's air quality models, air chemistry research will be conducted to characterize the lifetime and fate of urban HAPs.

A critical piece of the Agency's National Air Toxics Assessment (NATA), which will prioritize the HAPs posing the greatest health risks, is to estimate actual human exposure. Exposure research will combine modeling and measurement efforts to provide tools and data to estimate human exposure to air toxics with greater certainty. Exposure models will use stochastic approaches to measure average exposures as well as the maximum exposed individual. The models will also be useful in determining acute and chronic exposures. These activities will provide information on the relationships between ambient, indoor, and personal concentrations for several HAPs and identify key microenvironments and human activities which influence personal exposure.

Assessment activities planned for FY 2003 will develop cancer unit risk and chronic non-cancer inhalation reference concentrations (RfC), oral reference doses (RfD), and non-cancer acute reference exposure (ARE) values. Cancer and non-cancer dose-response assessment methodologies will also be refined to reduce uncertainty in human health risk assessments. Testing data from fuel/fuel additives will be reviewed and associated assessments developed.

Technical support under the air toxics research program includes consulting (e.g., on listing/delisting petitions and reports to Congress), evaluating alternative fuel and fuel additive testing results, and performing assessments and consulting on fuels and fuel additives. Research support activities will also provide review and consultation for residual risk assessments, national scale assessments, and indoor air assessments. The Air Risk Information Support Center (Air RISC) will continue to supply information on air pollution to state, Tribal, local, and Federal offices of environmental health protection.

FY 2003 Change from FY 2002 Enacted

Research

S&T

- (+$353,500; +2.3 FTE) Resources will be redirected within the Objective to air toxics exposure, methods modeling and emissions characterization. Planned research related to homeland security will conclude in FY 2002.

- (-$353,500; -2.3 FTE) Planned research related to homeland security looking at the flow characteristics and dispersion patterns of toxic air pollutants will conclude in FY 2002. Resources will be redirected to air toxics exposure, methods modeling and emissions characterization.

- (+$199,500) These resources from Goal 2, Objective 1, are for the purpose of developing additional dose-response assessments for mobile source air toxics.

- (+$71,600; +0.3 FTE). These resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.

- (-$4,095,000) The FY 2003 Request is $4,095,000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

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- (+$6,500,000) This increase will result in expanded and improved state, Tribal, and local agency monitoring of air toxics to help assess the effectiveness of EPA's integrated air toxics program, as well as the multi-pollutant strategy. In FY 2003, EPA will provide state, Tribal, and local agencies with grant funds to put in place a network approximately 20 additional air toxics monitoring sites. The resultant monitoring data will provide a resource of enormous scientific value. The ambient air toxics data will be useful in near-term and future activities such as:
  - identifying changes in local air toxics exposures and individual risks;
  - improving and updating estimates of nationwide inhalation exposures and risks (e.g., EPA's National Air Toxics Assessment);
  - tracking trends in emissions and concentrations of air toxics, as well as progress in reducing risks from air toxics exposures;
  - evaluating the effectiveness of EPA, state, Tribal, and local air toxics programs;
  - providing a "reality check" on actual emission reductions and ambient concentrations versus model-derived estimates;
  - providing inputs for other models that include or require air toxics information, including multi-media and cross-media exposure models.

Annual Performance Goals and Measures

Reduce Air Toxic Emissions

In 2003	Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 3% of the updated 1993 baseline of 6 1 million tons (for a cumulative reduction of 40% from the 1993 level of 6 1 million tons per year.)
In 2002	Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5% from 2001 (for a cumulative reduction of 40% from the 1993 level of 4 3 million tons per year.)
In 2001	End-of-year FY 2001 data will be available in late 2004 to verify that air toxics emissions nationwide from stationary and mobile sources combined will be reduced by 5% from 2000 (for a cumulative reduction of 35% from the 1993 level of 4 3 million tons)

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Combined Stationary and Mobile Source Reductions in Air Toxics Emissions	5	5	3	Percent
Federal Register Publication of Final MACT Standards	4	13	19	Notices
Number of proposed MACT standards	13	15	19	Proposed

Baseline	In 1993, the last year before the MACT standards and mobile source regulations developed under the Clean Air Act were implemented, stationary and mobile sources are now estimated to have emitted 6 1 million tons of air toxics (EPA's prior estimate was 4 3 million tons.) Air toxics emission data are revised every three years to generate inventories for the National Toxics Inventory. Reductions are estimated from regulatory controls in the years between the three year updates Using revised inventories and improved models, the estimate has been revised up from the previous estimate of 4 3 million tons.

Verification and Validation of Performance Measures

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

Performance Database: National Toxics Inventory (NTI)

Data Source: The NTI includes emissions from large industrial or point sources, smaller stationary area sources, and mobile sources. The baseline NTI (for base years 1990 - 1993) includes emissions information for 188 hazardous air pollutants from more than 900 stationary sources. It is based on data collected during the development of Maximum Achievable Control Technology (MACT) standards, state and local data, Toxics Release Inventory (TRI) data, and emissions estimates using accepted emission inventory methodologies. The 1996 and the 1999 NTI contain facility-specific, non-point source, and mobile source estimates and are used as input to National Air Toxics Assessment (NATA) modeling. (ASPEN, a dispersion model, contributes to NATA modeling.) The primary source of data in the 1996 NTI is state and local data. The 1996 and 1999 state and local facility data are supplemented with data collected during the development of the MACT standards and TRI data.

QA/QC Procedures: Because the NTI is primarily a database designed to house information from other primary sources, most of the QA/QC efforts have been to identify duplicate data from the different data sources and to supplement missing data. When a discrepancy among data sources is found, EPA tries to determine the best primary source data. Mobile source data are validated by using speciated test data from the mobile source emission factor program, along with peer-reviewed models which estimate national tons for the relevant year.

Data Quality Review: EPA staff, state and local agencies, and industry have reviewed the NTI. To assist in the review of the 1999 NTI, the EPA provided a comparison of data from the 3 data sources (MACT, TRI, and state and local inventories) for each facility.

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

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

Coordination with Other Agencies

EPA coordinates with many other agencies and organizations to achieve reductions of risk from air toxics. EPA works with the Department of Energy (DOE) on several fuels programs. Other programs targeted to reduce air toxics from mobile sources are coordinated with the Department of Transportation (DOT). These partnerships can involve policy assessments and toxic emission reduction strategies in different regions of the country. Other Federal agency partnerships have been created to share costs for researching health effects and collecting ambient air toxic monitoring data.

EPA also is forming partnerships with the Department of Defense (DOD) in the development of new continuous source monitoring technology for toxic metals emitted from smokestacks. This partnership will provide a new source monitoring tool that will streamline source monitoring requirements that a number of DOD incinerators are required to meet and improve the operation of DOD incinerators with real-time emissions information resulting in reduced releases of air toxics to the environment. In time, this technology is expected to be available for use at non-DOD facilities.

EPA also works closely with the DOE on refinery cost modeling analyses for EPA's clean fuel programs. For mobile sources program outreach, the Agency is participating in a collaborative effort with DOT's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) designed to educate the public about the impacts of transportation choices on traffic congestion, air quality, and public health. This community-based public education initiative also includes the Centers for Disease Control (CDC). In addition, EPA is working with DOE to identify opportunities in the Clean Cities program.

The Agency is continuing to work closely with the Department of Labor's Occupational Safety and Health Administration (OSHA) to coordinate the development of EPA and OSHA

standards, where necessary, to ensure that MACT standards designed to reduce air toxic emissions do not inadvertently increase worker exposures. EPA also works closely with other health agencies such as the Department of Health and Human Services' (HHS) CDC and the National Institute of Environmental Health Sciences (NIEHS) on health risk characterization. To assess atmospheric deposition and characterize ecological effects, EPA works with the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and the Department of the Interior's U.S. Fish and Wildlife Service.

The Agency has worked extensively with the Department of Health and Human Services (HHS) on the National Health and Nutritional Evaluation Study (NHANES) to identify mercury accumulations in humans. EPA also has worked with DOE on the 'Fate of Mercury' study to characterize mercury transport and traceability in Lake Superior.

During FY 2003, EPA will continue to work closely with the USDA through the joint USDA/EPA Agricultural Air Quality Task Force (AAQTF). The AAQTF is a workgroup set up by Congress to oversee agricultural air quality- related issues. The AAQTF is working to determine the extent to which agricultural activities contribute to air pollution and to develop cost-effective ways in which the agricultural community can improve air quality. In addition, the AAQTF coordinates research on agricultural air quality issues to avoid duplication and ensure data quality and sound interpretation of data.

Research

EPA's Air Toxics Research Program works with other Federal agencies, such as the National Institute of Environmental Health Sciences (NIEHS) and the National Toxicology Program (NTP), on an ad hoc basis to identify and coordinate research needs. The Agency also interacts with other organizations that conduct air toxics research. The Health Effects Institute conducts complementary research related to air toxics that is coordinated with EPA activities.

Statutory Authorities

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

Clean Air Act Amendments, Title II (42 U.S.C. 7521-7590)

Clean Air Act Amendments, Title IV (42 U.S.C. 7651-7661f)

Research

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

Objective: Reduce Acid Rain.

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

Resource Summary
(Dollars in Thousands)

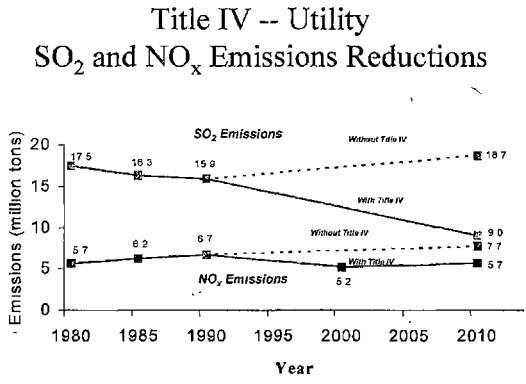
	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Reduce Acid Rain.	**$17,943.2**	**$20,991.1**	**$21,097.8**	**$106.7**
Environmental Program & Management	$13,472.0	$14,922.2	$15,278.9	$356.7
Science & Technology	$4,015.2	$4,241.2	$3,991.2	($250.0)
State and Tribal Assistance Grants	$456.0	$1,827.7	$1,827.7	$0.0
Total Workyears	86.6	92.5	91.5	-1.0

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Acid Rain -CASTNet	$3,991.2	$3,991.2	$3,991.2	$0.0
Acid Rain -Program Implementation	$12,248.7	$12,500.2	$12,790.4	$290.2
Administrative Services	$170.0	$0.0	$0.0	$0.0
Air,State,Local and Tribal Assistance Grants: Other Air Grants	$4,060.0	$1,827.7	$1,827.7	$0.0
Congressionally Mandated Projects	$249.4	$250.0	$0.0	($250.0)
Facilities Infrastructure and Operations	$0.0	$1,311.3	$1,292.6	($18.7)
Legal Services	$1,040.3	$834.7	$923.5	$88.8
Management Services and Stewardship	$135.6	$276.0	$272.4	($3.6)

FY 2003 Request

Emissions of sulfur dioxide (SO_2, mostly from power plants and other industrial sources) and nitrogen oxides (NO_x, mostly from power plants and motor vehicles) react in the atmosphere and fall to earth as acid rain, causing acidification of lakes and streams and contributing to the damage of trees at high elevations. Acid rain also accelerates the decay of building materials and paints, and contributes to degradation of irreplaceable cultural objects, such as statues and sculptures. NO_x emissions are also a major precursor of ozone, which affects human health and damages crops, forests, and materials. NO_x deposition also contributes to eutrophication of coastal waters, such as the Chesapeake Bay and Tampa Bay. Additionally, before falling to earth, SO_2 and NO_x gases form fine particles that could affect human health by contributing to premature mortality, chronic bronchitis, and other respiratory problems. The fine particles also contribute to reduced visibility, including at national parks.



The Acid Rain Program, authorized under Title IV of the Clean Air Act Amendments of 1990, focuses primarily on SO_2 and NO_x emissions from electric utilities, and has numerous statutory deadlines. Title II of the Clean Air Act Amendments requires reductions in NO_x emissions from mobile sources. The United States also is committed to reductions in SO_2 and NO_x emissions under the United States-Canada Air Quality Agreement of 1991. EPA's Acid Rain Program uses market-based approaches to achieve these emission reductions. The Program provides affected sources with flexibility to meet required emission reductions at the lowest cost (both to industry and government). The SO_2 component features tradeable units called "allowances" (one allowance authorizes the emission of one ton of SO_2), accurate and verifiable measurements of emissions, and a cap on total emissions. The Acid Rain Program continues to be recognized as a model for flexible and effective regulation, both in the U.S. and abroad.

Major Acid Rain Program activities include: measurement, quality assurance, and tracking of SO_2, NO_x, and CO_2 emissions, as recorded by Continuous Emissions Monitors (CEMs) or equivalent continuous monitoring methods at more than 2,500 electric utility units; conducting field audits and certifying emissions monitors; recording transfers of emission allowances in the SO_2 allowance tracking system; reconciling emissions and allowances for all affected sources to ensure compliance; and processing permit actions.

The Acid Rain Program was developed through two phases. Phase I of the Program began in FY 1995, requiring SO_2 reductions from approximately 400 electric utility units. Phase I also required approximately 250 of these units to make NO_x reductions beginning in FY 1996. Phase II of the Program began in FY 2000 and required reductions in SO_2 emissions from more than 2,500 electric utility units (gas-fired, oil-fired, and coal-fired) and reductions in year-round NO_x emissions from approximately 1,000 coal-fired units. Despite this increase in affected units, the number of quarterly emission reports processed (8,000 per year) has not increased as dramatically because Phase II electric utility units were already required to report their emissions.

There has been more than a four-fold increase in the number of units for which EPA will conduct an annual reconciliation of allowances with measured emissions. Concurrently, there has been a significant increase in SO_2 allowance trading activities in Phase II of the Program. EPA processed more than 1,000 private allowance transfers per year in Phase I, and expects this number to triple during Phase II. In addition, the number of subject sources has increased steadily as new capacity is built into the system to meet the Nation's expanding energy demands.

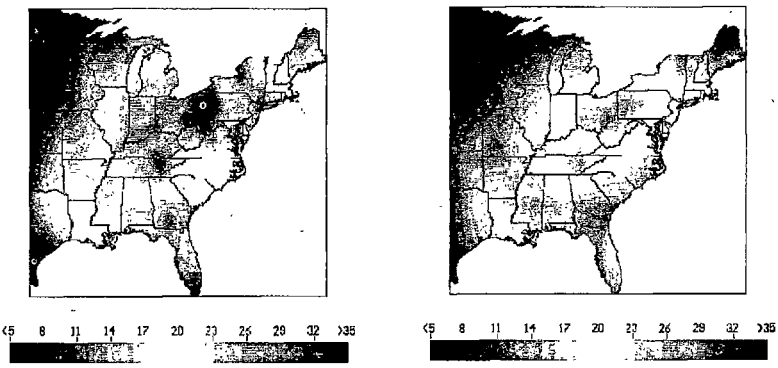
In addition to these operational activities, the Acid Rain Program is responsible for managing the Clean Air Status and Trends Network (CASTNet), a dry deposition monitoring network, as well as for providing critical operational support for the National Atmospheric Deposition Program (NADP), a wet deposition network. These monitoring efforts play a crucial role in the Program's ongoing assessment activities, including reporting outcomes under the Government Performance and Results Act (GPRA), and fulfilling assessment responsibilities under the United States-Canada Air Quality Agreement and Title IX of the Clean Air Act Amendments. In addition, the Program provides analytical support for the National Acid Precipitation Assessment Program (NAPAP), which was reauthorized under the Clean Air Act Amendments of 1990. NAPAP coordinates Federal acid deposition research and monitoring of emissions, acidic deposition, and their effects, including assessing the costs and benefits of Title IV. In FY 2003, the Acid Rain Program will continue analyzing the costs and benefits of the Program for inclusion in NAPAP's 2004 Integrated Assessment Report. In addition, the Program will initiate an integrated assessment of its effectiveness in addressing visibility, fine particle, and ozone impacts resulting from Phase II operations for the Ozone Transport Region.

States also carry out activities to implement the SO_2 and NO_x portions of the Acid Rain Program, including certification and re-certification of CEMs, field audits of CEMs, and permitting activities. Some states have elected to use their acid rain grant funds for monitoring activities to help assess the effectiveness of the program in reducing environmental risks.

The Acid Rain Program will produce significant benefits in terms of lowered surface water acidity and less damage to materials and high elevation forests. Nevertheless, after full implementation of the current program, significant residual risks will remain to human health, ecological systems, and quality of life. Thus, analysis to support a clean power legislative initiative will continue in FY 2002 to address this deficiency as well as issues related to visibility impairment and attainment of the national air quality standards for ozone and fine particles.

Sulfate Deposition in Acid Rain Reduced (kg/ha)

1989-91 **1995-97**



These maps represent snapshots of wet sulfate deposition over time. As illustrated in the 1995-1997 map, following the 1995 implementation of the Acid Rain Program, total sulfur deposition fell in a dramatic and unprecedented reduction of up to 25 percent over a large area of the Eastern United States.

FY 2003 Change from FY 2002 Enacted Budget

S&T

•• (-$250,000) The FY 2003 Request is $250,000 below the FY 2002 Enacted Budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Annual Performance Goals and Measures

Reduce SO2 Emissions

In 2003 Maintain or increase annual SO2 emission reduction of approximately 5 million tons from the 1980 baseline Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO2 emissions cap for utilities

In 2002 Maintain or increase annual SO2 emission reduction of approximately 5 million tons from the 1980 baseline Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO2 emissions cap for utilities.

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that 2 million tons of NOx from coal-fired utility sources were reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
SO2 Emissions	On track	5,000,000	5,000,000	Tons Reduced

Baseline: The base of comparison for assessing progress on the annual performance goal is the 1980 emissions baseline The 1980 SO2 emissions inventory totals 17.5 million tons for electric utility sources. This inventory was developed by National Acid Precipitation Assessment Program (NAPAP) and used as the basis for reductions in Title IV of the Clean Air Act Amendments This data is also contained in EPA's National Air Pollutant Emissions Trends Report Statutory SO2 emissions cap for year 2010 and later is at 8 95 million tons which is approximately 8 5 million tons below 1980 emissions level "Allowable SO2 emission level" consists of allowance allocations granted to sources each year under several provisions of the Act and additional allowances carried over, or banked, from previous years

Reduce NOx Emissions

In 2003 2 million tons of NOx from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments

In 2002 2 million tons of NOx from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that NOx emissions during ozone season from participating utility and industrial sources were below allowable level authorized by allowance (approximately 50% reduction from 1990 baseline)

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
NOx Reductions	On track	2 000,000	2,000 000	Tons Reduced

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

Reduce Ozone Season NOx Emissions

In 2003 Control NOx emissions during ozone season from participating utility and industrial sources to below allowable level authorized by allowances

In 2002 Control NOx emissions during ozone season from participating utility and industrial sources to below allowable level authorized by allowances

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that NOx emissions during ozone season from participating utility and industrial sources were below allowable level authorized by allowance (approximately 50% reduction from 1990 baseline)

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Ozone Season NOx Reductions	Data Lag	220,000	220,000	Tons Reduced

Baseline Performance Baseline The base of comparison for assessing performance on annual performance goals is the 1990 emissions baselines adopted in the state rules. The ozone season is 5 months long, May 1 to September 30 "Allowable NOx emissions level" is defined by the sum of allowance allocations authorized by various provisions in enabling state rules and allowances carried over, or banked, from previous years discounted by the Progressive Flow Control ratio An allowance authorizes a source to emit one ton of NOx during the ozone season

Verification and Validation of Performance Measures

Performance Measure: **SO_2 and NO_X emission reductions**

Performance Database: Emissions Tracking System (ETS), SO_2 and NO_X emissions collected by Continuous Emission Monitoring Systems (CEMS), CASTNet (dry deposition), National Atmospheric Deposition Program (NADP) (wet deposition)

Data Source:

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

QA/QC Procedures:

- QA/QC requirements dictate performing a series of quality assurance tests of CEMS performance. For these tests, emissions data are collected under highly structured, carefully designed testing conditions, which involve either high quality standard reference materials or multiple instruments performing simultaneous emission measurements. The resulting data are screened and analyzed using a battery of statistical procedures, including one that tests for systematic bias. If CEMS fails the bias test, indicating a potential for systematic underestimation of emissions, either the problem must be identified and corrected or the data are adjusted to minimize the bias.

- CASTNet has established data quality objectives and quality control procedures for accuracy and precision.

- NADP has established data quality objectives and quality control procedures for accuracy, precision and representativeness. The intended use of these data is to establish spatial and temporal trends in wet deposition and precipitation chemistry.

Data Quality Review:

- The ETS provides instant feedback to sources to identify any data reporting problems.

  EPA staff then conduct data quality review on each quarterly ETS file. In addition, states or EPA staff conduct random audits on selected sources' data submission.
- CASTNet recently underwent formal Agency peer review by an external panel.
- NADP methods of determining wet deposition values have undergone extensive peer review, handled entirely by the NADP housed at the Illinois State Water Survey/University of Illinois. Assessments of changes in NADP methods are developed primarily through the academic community and reviewed through the technical literature process.

Data Limitations: None

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

Coordination with Other Agencies

EPA participates with NAPAP, which coordinates Federal acid rain research and monitoring under the auspices of the National Science and Technology Council Committee on Environment and Natural Resources. As required by Title IX of the 1990 Clean Air Act Amendments, NAPAP prepares a biennial report that evaluates the costs, benefits, and effectiveness of the Acid Deposition Control Program under Title IV of the 1990 Clean Air Amendments. The NAPAP assessment is a multi-agency effort requiring cooperation and coordination among EPA, the Department of Energy, the Department of Agriculture, the Department of the Interior, the National Aeronautics and Space Administration, and the National Oceanic and Atmospheric Administration.

Statutory Authorities

Clean Air Act Amendments, Title I (42 U.S.C. 7401-7514a)

Clean Air Act Amendments, Title IV (42 U.S.C. 7651-7661f)

Clean Air Act Amendments, Title IX (42 U.S.C. 7403-7404)

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Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Clean and Safe Water

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Clean and Safe Water	**$3,627,441.4**	**$3,827,784.3**	**$3,214,674.2**	**($613,110.1)**
Safe Drinking Water, Fish and Recreational Waters	$1,171,900.7	$1,356,291.1	$1,148,425.1	($207,866.0)
Protect Watersheds and Aquatic Communities	$448,020.6	$463,061.1	$435,814.7	($27,246.4)
Reduce Loadings and Air Deposition	$2,007,520.1	$2,008,432.1	$1,630,434.4	($377,997.7)
Total Workyears	2,628.1	2,747.3	2,742.8	-4.5

Means and Strategy

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

EPA will continue to implement the SDWA Amendments of 1996 that chart a new and challenging course for EPA, states, tribes, and water suppliers. The central provisions of the Amendments include 1) improving the way that EPA sets drinking water safety standards and develops regulations based on good science, prioritization of effort, sound risk assessment, and effective risk management; 2) providing flexibility to the states in monitoring for certain contaminants and in setting time frames for compliance with regulations, and providing funding for improvements to drinking water infrastructure through the Drinking Water State Revolving

Fund (DWSRF); 3) establishing new prevention approaches, including provisions for operator certification, capacity development, and source water protection; and 4) providing better information to consumers, including consumer confidence reports.

EPA has a significant role in protecting public health from terrorist attacks on the nations critical water infrastructure. Through Presidential Decision Directive (PDD) 63, EPA is working through a public-private partnership to safeguard water supplies and wastewater treatment from terrorist acts. Using FY 02 base and supplemental funds, EPA and its partners, especially the American Water Works Association (AWWA) and the Association of Metropolitan Water Agencies (AMWA), fulfill this responsibility by providing technical and financial assistance to utilities to assess vulnerabilities of water supplies and to take appropriate actions to protect water systems.

EPA will continue 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 water quality criteria (including aquatic life, human health, biological, nutrient, and pathogen criteria), enhanced fish tissue monitoring, development of fish and shellfish consumption advisories, and risk assessment activities. For beaches, EPA's three-part strategy is to strengthen beach standards and testing, improve the scientific basis for beach assessment, and develop methods to inform the public about beach conditions. Beach water quality monitoring and public notification will be improved by providing grants to state and local governments as authorized under Section 406 of the Clean Water Act. These efforts help implement the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 with its emphasis on developing strong monitoring and notification programs.

Key to the watershed approach is continued development of scientifically-based water quality standards and criteria under the CWA and better consolidated identification of waters not meeting these goals under Sections 303(d) and 305(b). Where water quality standards are not being met, EPA will work with states and tribes to improve implementation of a Total Maximum Daily Load (TMDL) program that establishes the analytical basis for watershed-based decisions on needed pollution reductions. To support states and tribes in their standards adoption and TMDL programs, EPA will continue to provide scientifically sound criteria and guidance for toxic chemicals, nutrients, biological integrity, microbial, and physical stressors. 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, strengthen the focus of state nonpoint source programs on protecting and restoring waterbodies, and target the National Pollutant Discharge Elimination System (NPDES) permit program to achieve progress toward attainment of water quality standards and support implementation of TMDLs in impaired water bodies. The Agency will continue to work with states to reduce the NPDES permit backlog and to expand data management/electronic information activities to include permit information on storm water, combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), concentrated animal feeding operations (CAFOs), indirect discharges, and other emerging areas. Annual performance goals to reduce discharges

and to prevent pass through to the Nation's waters will identify these sources and model their loading reductions. With concrete information on the NPDES universe, including sufficient data to model loading reductions from all classes of discharges and integration of that information with other water quality data, EPA will be better able to describe the environmental improvements from approximately 550,000 point sources covered by NPDES permits.

EPA has moved forward to provide guidance and regulations to cover the expanding universe of NPDES facilities. The phase II storm water rule's permitting requirements become effective in FY 2003, and the CAFO rule will be issued in December 2002. Work to address CSOs and SSOs is also proceeding. EPA is completing guidance and data collection for reports to Congress as required by the Wet Weather Water Quality Act of 2000. Strategies are being developed for other emerging areas, such as pesticide discharges and invasive species, as well as expedited permitting of energy facilities.

The Clean Water SRF is an important tool for achieving clean and safe water by helping communities meet their significant needs for wastewater infrastructure over the next 20 years and providing increased support to address nonpoint source problems. The budget request includes $1.212 billion for the CWSRF. This investment continues EPA's for the CWSRF to provide $2 billion in average annual financial assistance over the long-term even after Federal assistance ends. Total SRF funds available for loans as of July 2001, reflecting loan repayments, state match dollars, and other sources of funding, are approximately $37.7 billion, of which $34.3 billion has been provided to communities as financial assistance. The Agency again requests that state flexibility to address their most critical demands be continued by extending their authority for limited funds transfers between the CWSRF and DWSRF for one year.

EPA is assisting states and tribes to characterize risks, rank priorities, and implement a mix of voluntary and regulatory approaches through improved state nonpoint source (NPS) management programs. Working with EPA, states and tribes are strengthening their NPS programs to ensure that needed nonpoint source controls are implemented to achieve and maintain beneficial uses of water. In particular, EPA and the states are working together to better use the Clean Water Act Section 319 framework and funds to develop and implement nonpoint source TMDLs. States will continue to implement coastal NPS programs approved by EPA and the National Oceanic and Atmospheric Administration under the Coastal Zone Act Reauthorization Amendments, and to work with the U.S. Department of Agriculture to promote implementation of Farm Bill programs consistent with state nonpoint source management needs and priorities. EPA will also provide tools to states to assess and strengthen controls on air deposition sources of nitrogen, mercury, and other toxics.

With respect to wetlands, EPA will work with Federal, state, Tribal, local, and private sector partners on protection and community-based restoration of wetlands, and with its Federal partners to avoid, minimize, and compensate for wetland losses through the CWA Section 404 and Farm Bill programs. In particular, the agency will focus its efforts on developing appropriate tools to assess wetlands extent and condition, increasing the success of wetlands restoration projects, and protecting vulnerable wetlands. EPA will be part of coordinated Federal

agency efforts to support conservation of fauna, including the North American Bird Conservation Initiative and Partners for Amphibians and Reptile Conservation.

EPA will work with states, tribes, municipalities, and the regulated community to ensure that the Phase II rules for the storm water program are implemented to address problems caused by sediment and other pollutants in our waters. EPA will also establish criteria for nutrients (i.e., nitrogen and phosphorus) so that more states can develop water quality standards that protect waters from harmful algal blooms such as *pfiesteria*, and prevent dead zones and fish kills which can develop as a result of an excess of these nutrients. EPA will work with states to fund priority watershed projects through the CWSRF to reduce nonpoint and estuary pollution. The Agency will also work to reduce pollution from failing septic systems. Finally, EPA will have a coordinated strategy for protecting drinking water sources that includes microbial pathogen, chemical, and nutrient criteria.

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 research provisions of the 1996 Safe Drinking Water Act (SDWA) amendments, the Agency's drinking water research will develop dose-response information on disinfection by-products (DBPs), waterborne pathogens, arsenic, and other drinking water contaminants for characterization of potential health risks from consuming tap water. The focus will be on filling key data gaps and developing analytical detection methods for measuring the occurrence of chemical and microbial contaminants on the Contaminant Candidate List (CCL). The Agency will develop and evaluate cost-effective treatment technologies for removing pathogens from water supplies while minimizing DBP formation, for maintaining the quality of treated water in the distribution system and for preventing the intrusion of microbial contamination. By reducing uncertainties and improving methods associated with the assessment and control of risks posed by exposure to microbial contaminants in drinking water, EPA is providing the scientific basis necessary to protect human health and ensure that by 2005, 95 percent of the population served by community water systems will receive water that meets health-based drinking water standards.

Research to support the protection and enhancement of aquatic ecosystems and their biotic components includes understanding the structure, function, and characteristics of aquatic systems, and evaluating exposures and effects of stressors on those systems. EPA is also working to develop biological and landscape indicators of ecosystem condition, sources of impairment, and stressor response/fate and transport models. The results of these efforts will improve risk assessment methods to develop aquatic life, sediment, habitat, and wildlife criteria, as well as risk management strategies and will help EPA and other Federal, state, and local agencies develop better baseline assessments of water quality. Through the development of a framework for diagnosing adverse effects of chemical pollutants in surface waters, EPA will be able to evaluate the risks posed by chemicals that persist in the environment and accumulate in the food chain, threatening wildlife and potentially human health. This research will facilitate

ecological health assessment of the nation's waters, providing water resource managers with tools for determining whether their aquatic resources support healthy aquatic communities. The Agency also will develop cost-effective technologies for managing suspended solids and sediments with an emphasis on identifying innovative in situ solutions.

Research in this goal will also provide the scientific basis and technical support for program, regional and state efforts to protect and inform recreational water users. A sound scientific foundation connecting water quality indicators and human disease will be established. This research will also develop diagnostic tools to evaluate human and ecological exposures to toxic constituents of wet weather flows (combined-sewer overflows (CSOs), sanitary-sewer overflows (SSOs), and stormwater). These events pose significant risks to human and ecological health through the uncontrolled release of pathogenic bacteria, protozoans, and viruses as well as a number of potentially toxic, bioaccumulative contaminants. EPA will develop and validate effective watershed management strategies and tools for controlling wet weather flows (WWFs), including: (1) new and improved indicator methods to describe the toxic inputs to watersheds from WWFs; (2) methods to utilize condition and diagnostic ecological indicators in evaluating wet weather flow management strategies in preventing degradation of water and sediment quality by contaminated runoff; (3) methods for diagnosing multiple stressors in watershed ecosystems; and (4) evaluation of low cost watershed best management practices to evaluate risks associated with various control technologies for wet weather flows.

Strategic Objectives and FY2003 Annual Performance Goals

Safe Drinking Water, Fish and Recreational Waters

- 85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in or after 1998.
- 92% of the population served by community water systems will receive drinking water meeting all health-based standards in effect as of 1994, up from 83% in 1994.
- Reduce human exposure to contaminated recreation waters by increasing the information available to the public and decision-makers.

Protect Watersheds and Aquatic Communities

- By FY 2003, Water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.
- 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.

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

Reduce Loadings and Air Deposition

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

- 900 projects funded by the Clean Water SRF will initiate operations, including 515 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 8,800 projects will have initiated operations since program inception.

Highlights

So that all Americans have water that is safe to drink, EPA will work to increase the percentage of the population that will receive drinking water from systems meeting all health-based standards in effect as of 1994. The Agency will continue to work with the states in implementing rules required by the 1996 amendments to the SDWA to control for microbial contaminants especially *Cryptosporidium,* disinfectants and their byproducts, arsenic, radon, radionuclides, and other contaminants.

In FY 2003, EPA will be completing final regulatory action on all contaminants specifically identified in the 1996 SDWA Amendments. Consequently, primary attention in FY 2003 will be focused on contaminants from the Contaminant Candidate List (CCL) and any potential revisions stemming from the statutorily mandated six year review of existing regulations. The CCL process, a new provision in the 1996 SDWA amendments, makes risk prioritization the dominant factor in selecting contaminants to regulate. EPA, in partnership with the states, water systems, environmental and public health groups, the scientific community, and the public, must use three criteria to determine whether or not to regulate a contaminant: 1) the contaminant adversely affects human health; 2) it is known or substantially likely to occur in public water systems with a frequency and at levels of public health concern; and 3) regulation of the contaminant presents a significant opportunity for health risk reduction. EPA is required to publish the second CCL in the *Federal Register* in August 2003. Also in 2003, the Agency will be revising, if necessary, existing national primary drinking water regulations that were reviewed in FYs 2001 and 2002 using the best available, peer-reviewed data on occurrence and associated health risks, analytical methods, and treatment technologies. Approaches to preventing contamination will continue to be emphasized and implemented in 2003 as EPA assists its partners and stakeholders in effectively implementing all available tools to protect vulnerable sources of drinking water supplies.

EPA, in concert with our many partners, is pursuing 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.

The Targeted Watersheds Project is a new $21 million program to provide grants to watershed stakeholders ready to implement comprehensive restoration actions. Targeted watersheds will be chosen based on criteria established in consultation with our state, local and other stakeholder partners, with emphases on value of the resource, likelihood of positive environmental outcomes, evidence of strong state/local government support, ability to leverage Agency resources, and readiness to proceed based on existing problem identification.

By FY 2003, with EPA's support, the National Estuary Program will have restored and protected an additional 25,000 acres of habitat, including sea grass and shellfish beds. In FY 2003, EPA will continue implementing appropriate management responses to harmful algal blooms and other marine pests and diseases. EPA will also implement the Agency-specific action plan in response to the Invasive Species Executive Order. Finally, EPA will implement management options resulting from its assessment of cruise ship and ballast water discharges.

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 NPDES program (which includes NPDES permits covering municipal and industrial discharges, urban wet weather, large animal feeding operations, mining, the 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 FY 2003 are to reduce loadings of toxic pollutants, nonconventional pollutants, and conventional pollutants from all categories of NPDES permitted facilities. To ensure that all point sources are covered by current permits, EPA developed a backlog reduction strategy under which 90 percent of major permittees and 84 percent of minor permittees would have current permits in place by the close of FY 2003. In support of that effort, EPA is developing a permit prioritization strategy to expedite reissuance of permits of low significance with respect to revisions needed to protect water quality. EPA will also continue evaluating data received from monitoring sites under the National Marine Debris Monitoring Program. This program monitors marine debris in an effort to determine sources of the debris, much of which enters coastal waters through stormwater runoff.

States report that pollution from nonpoint sources (NPS) is the largest cause of water pollution, with agriculture as a leading cause of impairment in 60 percent of the river miles assessed. In order to restore and maintain water quality, significant loading reductions from nonpoint sources must be achieved. State NPS programs are critical to protecting and restoring the Nation's water resources. To achieve reductions in NPS loadings, it is essential for EPA to work with states to expeditiously implement the nine key program elements in their strengthened state NPS programs. In addition, EPA will continue to encourage states to make use of CWSRF and other Federal resources to finance projects that address polluted runoff. As of mid-2001, states had invested nearly $1.4 billion in nonpoint source pollution controls through the CWSRF.

Research

In FY 2003, EPA's drinking water research program will continue to conduct research to reduce the uncertainties of risk associated with exposure to microbial contaminants in drinking water and improve analytical methods and risk assessments to control risks posed by drinking water contamination. As required by the SDWA amendments, the first Contaminant Candidate List (CCL) was published in 1998 and included nine microbial contaminants in its Research Priorities Category that require more data before a regulatory determination could be made. The drinking water research program will continue to focus on microbial contaminants on future CCLs. Significant data gaps still exist on the occurrence of these microbes in source and distribution system water, linkages between water exposure and infection, and the effectiveness of candidate treatment technologies to remove and inactivate these contaminants. Research efforts will also continue to support arsenic-specific research and development of more cost-effective treatment technologies for the removal of arsenic from small community drinking water systems. This work will include strategies for the acceptable control of water treatment residuals enriched with arsenic. The development of this crucial information will provide the scientific basis necessary to protect human health and ensure 95 percent of the population served by community water systems will receive water that meets health-based drinking water standards.

EPA is also conducting research on suspended solids and sediments (non-contaminated). Although suspended solids and sediment are a natural part of aquatic ecosystems critical to the energy cycle of the water body as well as the provision of microhabitats, they have become stressors associated with human activity that adversely affects aquatic habitats. Suspended solids and sediments have been identified among the leading causes of water quality impairment for streams and rivers. As part of EPA's efforts in FY 2003 to conserve and enhance the nation's waters, the suspended solids and sediments research program will continue to develop tools to determine background sediment levels inherent to a region.

Another area of research will focus on growing evidence of the risk of infectious diseases resulting from exposure to microbes in recreational waters. Exposure to these diseases is of particular concern after major rainfall events that cause discharges from both point and non-point sources. In FY 2003, EPA is investing resources to complete a suite of epidemiological studies needed to establish a stronger, more defensible link between water quality indicators and disease. These epidemiological studies will provide reliable information about the relationship between recreational water quality and swimming-associated health effects. This will enable EPA to provide states with consistent monitoring methods, standardized indicators of contamination, and standardized definitions of what constitutes a risk to public health.

External Factors

Drinking Water and Source Water

The SDWA Amendments of 1996 is one of the first environmental statutes to modify the Agency's traditional regulatory approach by encouraging a consensus- building process that includes EPA, the states, and all other drinking water stakeholders as partners in the development

and implementation of regulations. To date, this extensive collaborative and consensus approach has improved the Agency's efforts to implement the 1996 SDWA amendments. The complexity of identifying appropriate treatment technologies for the contaminants specifically identified in the amendments and determining which contaminants on the CCL to regulate pose a continuing challenge in implementing the 1996 SDWA amendments.

The adoption of health-based and other programmatic regulations by the states is another critical factor. Since almost all states have primary enforcement authority (primacy) for drinking water regulations, the states must have sufficient staff and resources to work with public water systems to ensure that systems implement, and comply with, new regulations. To help states with these efforts, EPA has increased Public Water Systems Supervision grant funding by approximately 60 percent since FY 1993. In addition, the use of state set-asides authorized in the enabling legislation for the DWSRF combined with required matching funds from the states is another significant source of funding for state drinking water implementation activities. However, the need to preserve DWSRF funding for infrastructure purposes coupled with state hiring restrictions may have some impact on implementation efforts.

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

Full implementation of the Underground Injection Control (UIC) program, including shallow injection wells of which two types are regulated through a rule promulgated in 1999, depends on state and local participation. Because of the sheer number of shallow injection wells - - over 600,000 nationwide - - and the threat they pose to ground water sources of drinking water, implementation of the overall UIC program could be affected by resource constraints at the state level. In addition, the Agency has full or partial direct implementation responsibility for 17 states, the District of Columbia and all tribes.

Fish and Recreational Waters

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

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

The Beaches Environmental Assessment Act and Coastal Health (BEACH) Act of 2000 provides Federal funds for states and tribes to monitor pathogens at coastal and Great Lakes beaches and notify the public of advisories or closures; however, the states and tribes are not required to operate a program if they do not accept Federal funds. The Agency expects that all 35 eligible states or territories will begin to operate a federally funded program by FY 2003.

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

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

Watersheds and Wetlands

EPA's efforts to meet our watershed protection objective are predicated on the continuation and improvement of relationships with our Federal, state, Tribal, and local partners. Because of the vast geographic scope of water quality and wetlands impairments and the large number of partners upon whose efforts we depend, we must continue to build strong and lasting relationships with all stakeholders including communities, individuals, business, state and local governments and tribes. EPA's ability to meet this objective will depend on the success of regulatory and non-regulatory programs and nationwide efforts to provide and use a broad range of policy, planning, and scientific tools to establish local goals and assess progress.

Given the interrelations of the Federal government's environmental protection and stewardship agency and programs, Federal resource and protection agencies must work together with states and tribes to maximize achievements. Without continued government-wide coordination and commitment, we may not meet our water quality objectives. For example, coordination with and utilization of Farm Bill conservation programs are crucial, particularly to enhancement of state nonpoint source management programs. Starting in FY 2000, as an incentive for states to upgrade these programs, the incremental Section 319 grant funds over $100 million in base funding have gone only to states with approved upgraded 319 programs. The states will also need to continue efforts to overcome historical institutional barriers to achieve full implementation of their coastal nonpoint pollution control programs as required under the Coastal Zone Act Reauthorization Amendments.

Success in meeting our wetlands objectives is particularly dependent on the continuing and enhanced cooperation with the Army Corps of Engineers, who has lead responsibility for wetland permitting, Fish and Wildlife Service, National Marine Fisheries Service, Federal Emergency Management Agency, and the Natural Resources Conservation Service. Recent court rulings (and related future rulings) will also have a significant impact on efforts to achieve environmental objectives in the wetlands program.

In addition, we must continue to improve our understanding of the environmental baseline and our ability to track progress against goals, which also depends on external parties. While the Index of Watershed Indicators and state 305(b) reporting provide some assessments of water quality, we will continue to depend upon and provide support to our partners and stakeholders in their efforts to improve measurement tools and capabilities including state consolidation of Section 305(b) reports and Section 303(d) lists. EPA is working with states to improve our tracking and measurement of NPS load reductions from the CWA Section 319 program. Also, as states adopt TMDLs, we will have specific targets for point source and NPS load reductions needed to meet water quality standards in impaired waters.

Point Sources

States and localities are assumed to be able to continue to raise sufficient funds for construction of necessary wastewater treatment and control facilities to accompany Federal financial assistance. In addition states must be able to maintain sufficient programmatic funds to continue to effectively manage point source programs.

Clean water goals associated with reduction of pollutant discharges from point sources through the National Pollutant Discharge Elimination System (NPDES) permitting program rely heavily on EPA's partnership with states as 44 states and 1 territory are currently authorized to carry out the NPDES program. EPA will also work with the states to reduce pollution from onsite- decentralized wastewater treatment systems, including septic systems. Surveys estimate that, nationally, about 10 percent of onsite-decentralized systems are malfunctioning. EPA is developing guidance to help states and local governments improve the way on-site decentralized systems are designed, sited, installed and managed to reduce water-related impacts.

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Clean and Safe Water

Objective: Safe Drinking Water, Fish and Recreational Waters

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Safe Drinking Water, Fish and Recreational Waters	**$1,171,900.7**	**$1,356,291.1**	**$1,148,425.1**	**($207,866.0)**
Environmental Program & Management	$128.789.7	$128 346.7	$110,143.9	($18,202.8)
Science & Technology	$52,429.6	$144.126.2	$69,230 1	($74,896.1)
State and Tribal Assistance Grants	$990.681 4	$1 083,818.2	$969,051.1	($114,767.1)
Total Workyears	835.2	897.6	887.4	-10.2

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Administrative Services	$783.6	$0.0	$0.0	$0.0
Beach Grants	$0 0	$10.000.0	$10,000.0	$0.0
Congressionally Mandated Projects	$129,188.8	$143,897.2	$0.0	($143,897.2)
Drinking Water Implementation	$35,058.0	$38.332.9	$38,935.0	$602.1
Drinking Water Regulations	$36,181.1	$28,597.4	$30,034.0	$1,436.6
EMPACT	$793.9	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$12,624.6	$12,116.5	$12,372.6	$256.1
Fish Contamination/Consumption	$3,188.4	$2.764 8	$2,788.4	$23.6
Homeland Security	$1,963.2	$86,058.1	$16,946 5	($69,111.6)
Legal Services	$1,135 4	$1,206.3	$1,317 6	$111.3
Management Services and Stewardship	$2,789.0	$4,025.0	$4.240.2	$215.2
PWSS - Homeland Security	$0.0	$5,000.0	$5,000.0	$0.0
Preventing Contamination of Drinking Water Sources	$22,424.7	$23,470.2	$22.096 8	($1,373.4)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Regional Management	$253.7	$357.7	$309.2	($48.5)
Safe Drinking Water Research	$47,784.7	$45,579.5	$49,491.0	$3,911.5
Safe Recreational Waters	$917.9	$834.4	$842.7	$8.3
State PWSS Grants	$93,100.2	$93,100.2	$93,100.2	$0.0
State Pollution Control Grants (Section 106)	$1,995.6	$0.0	$0.0	$0.0
State Underground Injection Control Grants	$10,950.9	$10,950.9	$10,950.9	$0.0
Water Infrastructure:Drinking Water State Revolving Fund (DW-SRF)	$823,185.0	$850,000.0	$850,000.0	$0.0

FY 2003 Request

The Safe Drinking Water Act (SDWA) was enacted to protect the health of all Americans served by public water systems. In 1996 Congress amended the SDWA (the Amendments) in four key areas to strengthen the ability of EPA, states, and drinking water utilities to provide safe, adequate, and reliable drinking water supplies. First, the Amendments require that EPA develop drinking water regulations based on the best available science and data, sound risk assessment, and cost/benefit considerations. Special attention is also focused on the health effects of contaminants on sensitive subpopulations, such as children, the elderly, and immuno-compromised individuals. Second, the Amendments provide flexibility to the states in monitoring for certain contaminants and in setting time frames for compliance with regulations, and provides funding for improvements to drinking water infrastructure through the Drinking Water State Revolving Fund (DWSRF). This component is aimed at improving the abilities of states and utilities to implement drinking water regulations. Third, the Amendments focus on preventing contamination of drinking water sources, providing greater support for small drinking water systems and requiring operator certification programs. Fourth, the Amendments call for increased consumer awareness of safe drinking water by requiring drinking water utilities to provide annual reports to their customers on the quality of their drinking water supplies and to notify the public during drinking water emergencies.

In FY 2003, EPA, states, Tribes and utilities will continue to be engaged in a vast array of activities to provide safe and reliable drinking water, from protecting sources to ensuring consumers' confidence in the safety of their tap water. By the end of 2003, 92 percent of the population served by community water systems will receive drinking water meeting all health-based standards, up from 83 percent in 1994.

Preventing Contamination of Drinking Water Sources

Preventing contamination of drinking water sources, or source water protection, is a high priority for the national drinking water program. Source water protection is a common-sense, cost-effective way to protect public health. By reducing or preventing contamination before water reaches utilities, treatment costs to utilities, and therefore consumer utility bills, are lower. Such cost savings are particularly important for small systems and Tribes, which tend to have less technical, financial and managerial capacity to operate a drinking water system. And for the approximately 140 million Americans who get their drinking water from ground water sources,

source water protection is often the only barrier against contamination. EPA and its partners are working together to protect source water by conducting source water assessments, protecting wellhead areas and sole source aquifers, and ensuring proper disposal of waste through underground injection. Nonetheless, a variety of factors increasingly threaten the safety of drinking water, including the effects of population growth, chemical use, and animal wastes, among others.

Effective source water protection starts with a comprehensive assessment of threats to drinking water sources based on sound data, and a deliberate strategy to prevent contamination. By the end of FY 2003, almost all states are expected to have completed baseline source water assessments for over 54,000 community water systems nationwide, and to have made this information available to communities. For FY 2003, EPA's and the states' preliminary target for completed assessments in FY 2003 is 39,000 community water systems that serve approximately 196 million or 75 percent of the U.S. population. While this target falls short of the deadline established in the 1996 SDWA Amendments, both EPA and the states believe that their efforts are consistent with a time frame that ensures a thorough and comprehensive assessment of community water systems. Based on a review of some of the assessments completed so far, states indicate that significant amounts of data are being collected on the actual and potential sources of contamination in source water assessment areas and the susceptibility of the water supply to those contamination sources. These assessments are being shared with community leaders and the general public within those source water assessment areas and serve as a framework for states, Tribes, local government, community water suppliers, and public health and environmental organizations to implement a source water protection program. In FY 2003, EPA will assist its partners and stakeholders in effectively implementing all available tools and approaches to protect the vulnerable sources of drinking water supplies and expect that 2,600 community water systems will have source water protection programs in place. Two critical components of a source water protection program will be emphasized, i.e., the identification of relevant state and Federal programs to support local efforts to protect source water, and the development of community-level actions tailored to local conditions that will increase the capacity of the public to protect its water supplies. With effective source water protection programs in place, small systems' treatment costs are lower because the water is cleaner before treatment - leading to lower utility bills for consumers served by small systems.

Linking underground injection control and source water protection is a critical step toward a comprehensive contamination prevention program. EPA works with states and communities to ensure the proper underground injection of approximately 9 billion gallons of hazardous waste every year, over 2 billion gallons of brine from oil and gas operations every day, and significant amounts of automotive, industrial, sanitary and other wastes that are injected into shallow wells. While regulations have been in place for deep well injection of hazardous waste and oil and gas operations for a number of years, EPA and the states are in the early stages of addressing potential contamination of drinking water supplies from shallow well injection practices. Protecting source water from contamination from nonhazardous wastes injected into shallow wells, which are categorized as Class V injection wells, is the principal focus of a rule promulgated in 1999. This regulation concentrates on two types of shallow underground injection wells: large capacity cesspools and motor vehicle waste disposal wells for which there are an estimated 200,000 nationwide. By the end of FY 2002, 28 states and territories with primacy for the underground injection control (UIC) program are expected to have adopted the Class V rule. In 2003, the

Agency will work closely with 10 states and territories that are preparing or in various stages of adopting the rule. By the end of FY 2003, all states and territories that intend to have primary enforcement authority for this regulation will attain primacy.

EPA will implement a management strategy (including guidance, outreach, training and technical assistance) to protect source water from other types of Class V wells in FY 2003. There are 23 categories of the more than 686,000 Class V shallow injection wells in the U.S. They range from the such categories as large-capacity septic systems (approximately 353,000) to geothermal direct heat wells for which there are only 100 or less nationwide. This management strategy encourages states to employ a variety of management tools and best management practices to prevent contamination of ground water resources that serve as drinking water supplies.

The Agency will continue to provide states and Tribes with the technical assistance and support they need to implement regulations for the other classes of injection wells, such as hazardous and nonhazardous waste wells, and oil and gas production wells. EPA also will continue to implement, in full or in part, the UIC program for 17 states, the District of Columbia, and all federally recognized Tribes.

EPA has a significant role in protecting public health from terrorist attacks on the nation's critical water infrastructure. Through Presidential Decision Directive (PDD) 63, EPA is working through a public-private partnership to safeguard water supplies and wastewater treatment facilities from terrorist acts. Using FY 02 base and supplemental funds, EPA and its partners, especially the American Water Works Association (AWWA) and the Association of Metropolitan Water Agencies (AMWA), fulfill this responsibility by providing technical and financial assistance to utilities to assess vulnerabilities of water supplies and to take appropriate actions to protect drinking water and wastewater systems. By the end of FY 2002, EPA and its partners will have strengthened the coordination of several critical counter-terrorism activities across the public and private sectors. First, AMWA, with financial support from EPA, will have made significant progress in developing an Information Sharing and Analysis Center (ISAC), which uses a secure web-enabled system that allows utilities to share threat information with the FBI and other utilities. The ISAC is scheduled for completion in May 2003. Second, EPA and its partners will have disseminated effective guidance for remedial plans in the case of a terrorist act. Third, education and awareness programs will continue so that water systems personnel are fully knowledgeable of approaches to vulnerability assessments and appropriate remedial actions. Finally, financial and technical assistance will have been provided to the 360 largest drinking water systems to identify and correct vulnerabilities to potential terrorist attacks; most will have completed their assessments and begun taking remedial action and enhancing their emergency response plans.

Resources support development of tools and training materials to assist drinking water and wastewater utilities in conducting vulnerability assessments and developing emergency operating plans. Resources also support vulnerability assessments by drinking water utilities, and where such assessments have been completed, support other security planning and measures. Resources support State counterterrorism coordination to work with drinking water utilities on infrastructure security measures. Finally, resources support determining appropriate technologies to identify threats and remediate consequences of attacks.

Setting Drinking Water Standards

One of the Agency's fundamental responsibilities is to establish standards that protect public health from contaminants in drinking water. Consistent with both the authority and direction included in the SDWA, EPA fulfills this important responsibility by setting national primary drinking water standards. The 1996 SDWA Amendments included the requirements that drinking water regulations be based on sound science and health risk assessments, and that priorities be developed based on relative risks and health effects data. In addition, the Amendments require EPA to periodically evaluate the effectiveness of existing health-based standards in protecting public health.

The 1996 Amendments acknowledge the significant risk management challenge posed by microbial contaminants (i.e., bacteria, viruses and protozoa) in drinking water. This challenge remains despite widespread disinfection practices and major public health advances of the 20th century. Some pathogens, such as *Cryptosporidium*, are highly resistant to standard disinfection practices. In addition, disinfection itself poses human health risks, because disinfectants are unsafe at certain concentrations, and can react with naturally-occurring elements in water to form unintended "disinfectant byproducts" or DBPs. The 1996 SDWA Amendments require EPA to develop a set of regulations, called the Microbial- Disinfection Byproducts (M/DBP) rule cluster, that balance reducing the health risks from pathogens with limiting exposure to DBPs.

In FY 2003, EPA will complete its efforts related to the M/DBP rule cluster through the promulgation of the Long-Term 2 Enhanced Surface Water Treatment (LT2) rule, the Ground Water Rule (GWR), and the final Stage 2 Disinfection/Disinfection Byproducts (Stage 2) rule. These rules will expand human health protection against DBPs and microbial pathogens. LT2 requires public water systems at greater risk of microbial contamination to install additional treatment for *Cryptosporidium*, a pathogen which causes the gastrointestinal illness cryptosporidiosis. It is estimated that LT2 will prevent 53,000 to 542,000 cases of cryptosporidiosis annually, resulting in an estimated reduction of 10 to 104 cryptosporidiosis associated deaths. EPA expects that LT2 also will reduce pathogens that co-occur with *Cryptosporidium*, such as *Giardia*. The GWR establishes multiple barriers to protect ground water sources of drinking water against contamination by bacteria and viruses, and includes a targeted strategy to identify ground water-based systems at high risk for fecal contamination. Stage 2 will further mitigate potential health risks of cancer, developmental and reproductive effects from exposure to DBPs. Consistent with the 1996 Amendments, EPA will promulgate LT2 and Stage 2 together to ensure that drinking water systems are able to protect consumers from pathogens and DBPs concurrently. With the issuance of the Ground Water and LT2/Stage2 regulations, the Agency will have completed nearly all rules - both microbial and chemical - that were specifically identified in the 1996 Amendments. The TCR/Distribution rule, under the statutorily mandated six-year review process discussed below, will be proposed in 2003 and promulgated in 2004.

While regulatory development for specific contaminants cited in the 1996 SDWA Amendments will be phasing out, the Agency will be involved in implementing the unique provisions of the Amendments that make risk prioritization the basis on which the selection of

contaminants to regulate is made. Pursuant to the SDWA Amendments, the Agency must develop a Contaminant Candidate List (CCL) to aid in regulatory priority-setting for the national drinking water program. In establishing the CCL, EPA divided contaminants into three categories: 1) those that are priorities for additional research into health effects, treatment technology, or analytical detection methods; 2) those which need additional occurrence data, and; 3) those which require a regulatory determination. To support its efforts to set regulatory priorities, EPA is engaged in ongoing evaluation and analyses of the occurrence of chemical and microbiological contaminants in source water; outbreaks of disease/illness for microbiological occurrence; dose-response relationships for contaminants of concern, including projected impacts on sensitive subpopulations; efficacy of various treatment technologies for removing contaminants of concern; and, analytical methods to ascertain the presence (at levels of interest) of specified contaminants. On the basis of these analyses, the Agency determines whether to regulate at least five contaminants on the CCL every five years. EPA is required to publish the second CCL (CCL2) in the Federal Register in August 2003. In support of the development of the CCL2, the Agency called upon the National Research Council (NRC) of the National Academy of Sciences to recommend a better methodology for screening and classifying contaminants being considered for future CCLs. EPA is evaluating the feasibility of adopting the NRC's recommendations as it proceeds to develop the CCL2. Among the areas the Agency is considering for improvement are: 1) involving stakeholders and encouraging public participation in CCL2 development, 2) determining how contaminants from the CCL1 will be reflected on the CCL2, 3) choosing the appropriate criteria for screening and classifying contaminants, and 4) increasing the identification and analysis of ongoing and emerging research to address occurrence issues, health effects, treatment technologies, and other issues that are central to implementing the new regulatory development approach set forth in the 1996 SDWA Amendments. In conjunction with rule making activities, EPA is working on identifying and developing methods for evaluating the health benefits associated with drinking water regulations. One or more CCL chemicals will be used as a prototype for methods development.

EPA is adopting a strategy for future actions to integrate and extend its current programs to reduce adverse impacts of microbiological contaminants in water. Specific goals of the strategy include identification of ongoing activities and enhancing our involvement in several areas: using mandates of the CWA and SDWA to provide an integrated approach to public health protection; developing analytic tools to identify and monitor for known and emerging pathogens; identification and control of pollutant sources so that waters will meet protective use criteria; coordination of regulatory and research activities, and; participation of public agencies and stakeholders.

The 1996 SDWA Amendments also require EPA to review and, if appropriate, revise all existing primary drinking water regulations no less frequently than once every six years. Any revisions to existing drinking water regulations must maintain or increase the level of public health protection provided. EPA may, however, identify changes that reduce existing regulatory requirements without lessening the level of public health protection. As a part of this effort, EPA has developed an overall protocol for the six-year review process. This protocol requires the use of the best available, peer-reviewed data on occurrence and associated health risks, state-of-the-art analytical methods, and review of the best available treatment technologies. By August 2002, EPA will have completed its review of 67 National Primary Drinking Water Regulations (NPDWRs) for inorganic, synthetic organic, and volatile organic chemicals regulated prior to 1996, at which time it

will publish a *Federal Register* notice that lists which contaminants will be subject to revision, and their regulatory schedule. In FY 2003, EPA will begin to revise NPDWRs listed in August 2002. In revising the regulations, the Agency will examine the best available scientific data, conduct sound risk assessments, and weigh the costs and benefits of proposed changes to ensure that the NPDWRs continue to provide the most feasible level of health protection for Americans served by public water systems.

In addition to completing the six-year review for 67 NPDWRs for chemical contaminants, the Agency will conduct separate reviews of the total coliform and atrazine regulations. In FY 2003, EPA anticipates developing a proposed Total Coliform Rule (TCR)/Distribution System regulation as agreed to in the September 2000 Federal Advisory Committee Act (FACA) Agreement in Principle. The FACA Committee, convened to advise the Agency in the development of the LT2/Stage 2 regulations, recognized the significant health risks from exposure from contaminants as a result of cross connections and backflow in aging distribution systems. Given these health risks, the FACA recommended that EPA begin a separate review of the TCR in January 2001 that will conclude in FY 2002. EPA anticipates that revisions to the TCR will streamline the monitoring and reporting requirements for drinking water systems, and the Distribution System part of the rule will protect consumers from health risks associated with the contamination of finished water.

As part of the six-year review process, and in response to the Children's Health Advisory Committee's (CHAC) recommendations, EPA has committed to a review of the atrazine rule in FY 2003. The CHAC recommended a review of the atrazine regulation given new information on the hormonal and developmental effects in children exposed to this pesticide. The review schedule for atrazine is on a separate track from the other NPDWRs to accommodate the risk assessment being done by the Agency's Office of Pesticide Programs.

The Agency recognizes that voluntary initiatives are effective complements to regulatory approaches to protecting public health. In FY 2003, the Agency will continue its work with states and systems in both the *Partnership for Safe Water* and the Area-Wide Optimization Program to improve the ability of systems to implement the M/DBP regulations. Although these two initiatives share a common goal, to optimize the performance of drinking water treatment through effective filtering processes, they have very different approaches. Under the *Partnership for Safe Drinking Water*, EPA directed its efforts on providing tools to large/very large systems to help these systems lower turbidity levels in their drinking water and thereby reduce human health risk from microbial contamination. In its five years of operation, the *Partnership* has been very successful. Over 200 of the nation's 360 very large public water systems (serving over 100,000 people) that provide water to over 58 percent of the U.S. population are members and are carrying out various phases of the *Partnership for Safe Water* activities. We expect that this number will increase as more large systems join this collaborative effort.

In contrast to the *Partnership*, EPA has designed the Area-Wide Optimization program, or AWOP, as an initiative with states to identify and work with drinking water systems that need to improve their treatment performance. The Agency has developed a comprehensive performance evaluation (CPE) that assesses systems' capacity to address and apply appropriate treatment

methods to address human health risks associated with their drinking water supplies. In FY 2001, this initiative was tested in selected states in two EPA Regions. EPA staff worked directly with drinking water staff of the "pilot" states in both conducting CPEs of the drinking water systems within the state and prioritizing technical assistance to these systems based on health risk. The pilot has demonstrated the potential effectiveness of this initiative, which will be expanded in both FYs 2002 and 2003. By the end of FY 2003 we expect that the AWOP will be implemented in the states within at least five Regions.

Implementing Drinking Water Regulations

Under the SDWA, EPA is responsible for assisting states and drinking water systems in the implementation of drinking water programs to ensure the provision of safe, reliable and adequate drinking water supplies. The Agency provides technical assistance and training to state agencies to maintain and enhance state capacity to implement drinking water programs. EPA also works closely with states to: ensure proper certification of water system operators; promote consumer awareness of the safety of drinking water supplies; maintain a national database for program management and the development of regulations, trends analyses, and public information, and; target technical assistance to small and disadvantaged systems to maintain their capacity to comply with regulations. For states and Tribes that do not have primary enforcement responsibility (primacy) for implementing drinking water regulations, the Agency also directly implements the drinking water program.[1]

To ensure the long-term viability of the national safe drinking water program, the 1996 Amendments require states to develop capacity development strategies to help drinking water systems improve their financial base, management practices, infrastructure, and operations. EPA support of states' capacity development strategies directly affects public health outcomes, as these strategies provide a comprehensive framework for ensuring that systems maintain and enhance their ability to comply with drinking water standards. States use these strategies to determine how best to target limited resources to drinking water systems, especially small systems, that are in need of technical, financial or managerial support. For example, states may help systems prepare business plans in anticipation of future growth, train system operators on how to detect leaks in distribution systems, and establish water rates that recover the costs of providing safe drinking water at a reasonable expense to consumers. By the end of FY 2002, states will have had two years of experience implementing their capacity development strategies. In FY 2003, EPA will work with states to review progress in implementing their strategies, consider mid-course corrections, and jointly evaluate lessons learned. The Agency also will continue to work closely with primacy states to ensure that they adopt recently promulgated regulations and implement them effectively. By the end of FY 2003, 53 states/territories will have adopted the Microbial and Disinfection Byproducts rules as well as the Consumer Confidence Report rule, all of which were promulgated in 1998. Twenty-eight states/territories will have adopted the Public Notification rule, and 15 states will have adopted the Lead and Copper rule revisions.

[1] As of 2001, only Wyoming and the District of Columbia do not have primacy.

In the 1996 SDWA Amendments, Congress recognized that in comparison to larger systems, small water systems (those serving fewer than 3,300 persons) face greater financial, technical and managerial barriers to providing safe and affordable drinking water. To address these barriers, the Amendments include a number of statutory provisions that direct EPA and states to help small communities comply with drinking water standards. These provisions are designed to ensure that every public water system has the sustainable capacity to carry out its public health responsibilities. States, EPA and local utilities have made good progress toward this objective, but small systems continue to have difficulty meeting new regulatory requirements. And in the near future, small systems will face additional challenges in implementing drinking water standards for microbial contaminants, arsenic and radon. These challenges include addressing high treatment costs, implementing complex treatment technology, and increasing their capacity to monitor and improve performance.

In FY 2003, the Agency will implement a two-part approach to assisting small systems. First, the Agency will expand and accelerate current efforts to assist small systems in enhancing their technical, financial, and managerial capacity. This expansion includes both improving states' ability to help small systems, as well as EPA's direct assistance to small systems. Under this approach, EPA will give higher priority to those states in which a disproportionate number of small systems are affected by any given rule. The Agency will continue efforts begun in 2002 to assist states and small systems in the implementation of the new arsenic in drinking water standard. In FY 2003, EPA will provide guidance to small systems in the use of effective, practical and affordable treatment technologies. In addition, the Agency will provide compliance manuals, capacity development tool kits and other useful training materials to improve states' ability to ensure that small systems have the technical, financial and managerial capacity to comply with the new arsenic standard.

Second, the Agency will expand the AWOPs described above, with a special emphasis on small systems to improve their performance in meeting drinking water standards. Currently, in the individual systems where AWOPs or individual components of AWOPs have been tested, systems have achieved performance levels sufficient to meet the tighter turbidity requirements of the Long-Term Enhanced Surface Water Treatment Rule (LT1ESWTR). Based on this success, widespread application of AWOPs or their components is expected to enhance significantly the ability of small systems to meet the requirements of future microbial regulations, e.g., LT2 and Stage 2 D/DBP.

Safe drinking water regulations protect public health only if systems are able to implement them properly. The operator certification program is one tool in ensuring effective implementation. In FY 2003, all 50 states and Puerto Rico will have approved operator certification programs in place and between 25-30 states/territories will have received EPA's approval to receive their Operator Certification Expense Reimbursement Grants.[2] These grants reimburse states for the cost of training and certifying operators of community and non-community water systems serving 3,300 or fewer persons. The Agency also will continue to work closely with Tribes in 2003 to assist them

2 As was the case in 2001 and 2002 ($30M, respectively), the Agency will set aside resources from the DWSRF in 2003 ($30M) for grants to states to be used for reinbursing small system operators for the costs of training and certification, as authorized in section 1419(d)(4) of SDWA.

in training and certifying water operators of systems providing drinking water to Tribal communities.

The nation's over 54,000 community water systems also must continually upgrade their infrastructure to maintain their capacity to provide safe, reliable and adequate water supplies to the public. Many systems, however, cannot afford infrastructure improvements without significant public financing. The 1996 Amendments require EPA to administer the Drinking Water State Revolving Fund (DWSRF) to ensure that states and Tribes make infrastructure improvements, and maintain their capacity to implement regulations. The DWSRF provides financial assistance to public water systems through revolving loan funds for water systems to upgrade their drinking water infrastructure. In addition, the DWSRF provisions target financial support to small and disadvantaged communities in two ways. First, interest rates for loans to small and disadvantaged communities may be as low as 0 percent over a repayment period of 20 years for small communities, and up to 30 years for disadvantaged communities. In addition, each state must provide a minimum of 15 percent of available funds for loans to small communities, and has the option of providing up to 30 percent of available funds to state-defined disadvantaged communities.

By the end of FY 2003, states and water systems will have established 3,000 assistance agreements and initiated infrastructure improvements in 1,200 systems. In spite of the ongoing and successful efforts of EPA and states to ensure that systems continually upgrade their drinking water infrastructure, current levels of Federal infrastructure financing fall far short of national needs. According to the Agency's 2001 Drinking Water Infrastructure Needs Survey, the total 20-year national infrastructure need is $150.9 billion, $31.2 billion of which is needed to ensure the provision of safe drinking water under existing and recently proposed regulations. This need is even more pressing in the face of the projected increases in population growth and the subsequent increase in demand for safe drinking water over the next several decades.

Maintaining Tribal drinking water infrastructure remains a significant implementation challenge. Fifty percent of all Alaska Native villages to do not have drinking water systems, and 40 percent of Navajo households are not connected to drinking water distribution systems and must collect water by hand. Tribal drinking water infrastructure needs are estimated at $2.2 billion over the next 20 years. In FY 2003, the Agency will continue to work closely with federally recognized Tribes to build and improve Tribal drinking water infrastructure.

Water systems also must supply data on drinking water quality and compliance activities to states and EPA through the Safe Drinking Water Information System (SDWIS), the central repository for data on compliance with drinking water regulations. SDWIS serves as the primary source of national information on all SDWA requirements, and is a critical database for program management and the development of regulations, trends analyses, and public information. In FY 2003 EPA will further improve SDWIS to help meet states' evolving information needs. First, EPA will continue to work with states to implement the jointly developed Data Reliability Action Plan (DRAP), a multi-step approach to improve the quality and reliability of data in SDWIS. Two specific activities that will be emphasized in FY 2003 are training courses for SDWIS data entry, error correction, and regulation-specific compliance determination and reporting requirements and making SDWIS-state web-enabled to allow broader public access to state-level drinking water

information, and to simplify data entry for states. Many states are converting from their existing drinking water data information system and are adopting and/or using SDWIS-STATE. SDWIS-STATE is the counterpart to EPA's Federal drinking water information system, SDWIS-FED. When SDWIS-STATE is fully utilized by a state, the information it holds meets the Agency's minimum data requirements and can easily be reported to EPA, thereby improving data quality and accuracy. In 2003, the Agency expects that most states will be using SDWIS-STATE.

EPA, in partnership with the states, will continue its work to develop and refine information modules for drinking water program activities not currently in SDWIS. By the end of FY2003, EPA and members of the drinking water community will have established improved linkages among states and EPA databases, increasing national capacity for data transfer between Federal and state level-information systems. EPA and its partners also will have completed a SDWIS-module for the Source Water Protection and UIC programs. In FY 2003, states will begin to adopt this module for use with SDWIS-STATE. Once integrated with SDWIS, the modules will provide a more comprehensive data set with which to characterize the quality of the nation's drinking water supplies.

Finally, in FY 2003 EPA will begin to implement recommendations provided through an extensive stakeholder assessment of information system enhancements that would better support the management and operations of the national drinking water program. The long-term (2004) goals of this strategy are to better align information systems with currently unmet information needs created by the SDWA Amendments. These include CCL-driven regulatory development processes, 6-year regulatory reviews and subsequent revisions, expanded source water assessment and protection efforts, and emphasis on consumer awareness of drinking water quality.

In addition to compliance information, drinking water systems must also provide their customers with annual reports on the quality of the drinking water they provide. These yearly reports were a new requirement of the SDWA, as amended in 1996, and the Agency promulgated the Consumer Confidence Report rule in 1998. Community water systems compliance with this rule has been noteworthy; with very few exceptions, all systems have issued reports since 2000 and with the small systems efforts described above, we expect that those very small systems that have not issued a report will by the end of FY 2003. Systems are also adopting and implementing the requirements related to the Public Notification rule, i.e., notifying customers faster when drinking water emergencies occur.

The Agency will continue to participate in a multi-media effort to identify contaminants that may disrupt endocrine functions in fish, wildlife, and humans. The endocrine system plays an essential role in human differentiation and growth; individuals undergoing development - both in utero and through adolescence may be the most sensitive populations at risk for endocrine disruption. The Food Quality Protection Act (FQPA) and SDWA direct the Administrator to conduct studies to examine whether and to what degree people might be likely to experience elevated health risks associated with drinking water source contaminants that have endocrine disrupting potential. EPA will continue to investigate the impacts of potential endocrine disruptors on human health and the effect of water treatment on hormones.

Safe Consumption of Fish and Shellfish and Recreational Waters

Reducing exposure to contaminants in fish and shellfish and through contact in primary and secondary recreational waters is a top priority for the National Water Program. In 2003, the Agency will continue to work with its state partners to ensure that they adopt and maintain scientifically-based criteria and consistent assessment and notification programs to protect recreation, fish consumption, drinking water, and aquatic life uses.

About 75 percent of the Nation's population lives, works, or plays on or near our coastal waters. Studies indicate that susceptible populations (e.g., children) are the most likely to develop illnesses or infections after swimming in polluted water. To protect human health, the Agency strives to establish improved safety guidelines and pollution indicators so that local authorities can monitor their recreational waters in a cost-effective way, close them to public use when necessary, and effectively communicate risks to the public. For beaches, our three-part goal is to strengthen beach standards and testing, improve the scientific basis for beach assessment, including accurately determining causes of beach closures, and develop methods to inform the public about beach conditions. The Agency will achieve these goals for coastal and Great Lakes beaches through implementation of the BEACH Act of 2000. Implementing the BEACH Act will include awarding grants to state, local, and Tribal governments to implement programs for stratified monitoring and public notification of beach closures when bacterial contamination poses a risk to swimmers; the Agency has established performance criteria for use in state and Tribal beach programs as a condition for receiving these grants. The Agency will also begin a process to work with other Federal agencies to assist them in developing a beach program consistent with the BEACH Act. Also, the BEACH Act requires that protective water quality standards for bacteria must be in place for coastal and Great Lakes waters by 2004; the Agency will continue the process of publishing water quality standards for coastal states and Tribes that have not yet adopted standards based on EPA's 1986 criteria for pathogens.

Monitoring used by states in their fish and shellfish advisory programs vary widely. In support of this effort, the Agency will continue a nationwide survey of toxic residues in fish and complete epidemiological studies in the Great Lakes, in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR), on the health effects of exposure to selected bioaccumulative toxics. The nationwide survey of toxic residues in fish is a top priority project needed to identify the most prevalent contaminants in fish throughout the U.S. The Agency will support monitoring/modeling pilot programs that improve states' ability to predict and address contamination events at beaches. The Agency will also evaluate the health risks in seafood harvested from the Gulf of Mexico and continue to work on alternative risk-based indicators and methods for skin, respiratory, eye, ear, throat, and gastrointestinal diseases most commonly resulting from exposure to contaminants at beaches. EPA will also issue up to three human health criteria for bioaccumulative pollutants. In addition, the Agency will continue to work with stakeholders, encouraging full involvement at all levels of government, to expand the total proportion of surface waters assessed for possible fish and beach contamination, and to implement fish consumption and beach advisory programs that are consistent with published national guidance.

To assure that the public has timely information on the quality of local beaches and fishing areas, the Agency will continue to expand an Internet-based Federal information source called Beach Watch on beach advisories and closings across the United States and the National Listing of Fish and Wildlife Advisories on fish advisories. Working with states, Tribes, and local governments, EPA will continue to expand the Beach Watch database to include information on high-use fresh water beaches, including the location of nearby CSO outfalls, and fishing areas. We will also add digitized maps of coastal and inland high-use beaches to the Internet database. The Agency will also operate a database of pollution occurrences at beaches to conform with the requirements of the BEACH Act of 2000, and begin the process of developing a list of discreet coastal recreation waters adjacent to beaches or similar points of access. Also working with states and Tribes, EPA will continue to expand the National Listing of Fish and Wildlife Advisories to include the fish tissue information that states and Tribes used to issue the advisories.

Research

Considerable progress has been made over the past 20 years in providing a sound scientific foundation for Federal regulations to protect the safety of the nation's water supply. In FY 2003, drinking water research will remain a high priority for the Agency in recognition of the need for new data, improved tools and cost-effective technologies for addressing both known and emerging threats. Specifically, EPA has committed to focus research and development efforts on more cost-effective treatment technologies for the removal of arsenic from small community drinking water systems. Arsenic work in this objective will be conducted in concert with related research and development efforts in Goal 5 and Goal 8. Research on chemicals and on microbial pathogens found in drinking water remains a high priority for EPA because of the critical need to improve our ability to assess and manage risks to the general population as well as to sensitive subpopulations. The research provisions of the 1996 Safe Drinking Water Act (SDWA) amendments highlight the importance of this research for providing a sound scientific basis for regulatory decision making.

To address these needs, EPA has established an integrated, multi-disciplinary research program in the areas of exposure, health effects, assessment, and risk management. This program directly supports SDWA priorities, including: 1) research on sensitive subpopulations, adverse reproductive outcomes and other potential health effects of drinking water contaminants; 2) studies on disinfection by-products (DBPs), arsenic, complex mixtures, and the occurrence of waterborne disease in the U.S.; and 3) developing methods to improve water treatment and maintain water quality in the distribution system. A dual emphasis is being placed on: 1) chemicals and microbes on the Contaminant Candidate List (CCL), a list of over 60 unregulated chemicals and microbes, from which contaminants are selected for future regulatory determinations; and 2) the development of more cost-effective treatment technologies to help small systems meet the new arsenic standard.

In FY 2003, exposure research will continue to focus on the development of improved analytical detection methods for measuring the occurrence of chemicals and microbes on the CCL. Improved methods to detect and measure human exposure to microbes will be developed and applied in human population exposure studies. Results of these studies will help: 1) reduce the uncertainty regarding multi-route and multi-source exposure; 2) determine whether microbes that may be the cause of waterborne disease are viable and infective; 3) evaluate the effectiveness of

current regulations and treatment practices; and 4) characterize the exposure conditions that are associated with adverse health effects, particularly for highly sensitive sub-populations (children, the elderly, and the immuno-compromised).

EPA's drinking water health effects research program in FY 2003 will continue to focus on laboratory, clinical, and field studies of selected high priority DBPs, arsenic, and contaminants on the CCL. Studies of chemical contaminants on the CCL will seek to provide either screening level or more detailed information to support CCL regulatory determinations. Laboratory research on selected DBPs will also examine their potential carcinogenicity, as well as other toxic endpoints (e.g., neurotoxicity, immunotoxicity) of possible concern. Emphasis will be placed on studies to evaluate potential adverse reproductive outcomes. EPA will continue to evaluate the influence of source water quality, treatment technology, and demographic characteristics on waterborne disease in selected communities in the United States. Research will also include studies to establish dose-response relationships for priority pathogens, to characterize pathogen virulence and the range of outcomes on infection, to evaluate the impact of host factors (e.g., immune status) on infection and disease, and to identify the etiologic agents responsible for waterborne diseases.

Risk assessment research utilizes exposure and health effects information to characterize the magnitude and severity of risks associated with exposures to drinking water contaminants. In FY 2003, this research will continue to improve dose-response modeling for cancer and non-cancer risk associated with exposures to DBPs (both single chemical and complex mixtures) and individual contaminants on the CCL. In addition, the risk from pathogenic microorganisms that are transmitted through drinking water will be quantitatively assessed using health effects and exposure information to address factors such as occurrence, infectious dose, host immunity, and morbidity and mortality rates. Particular emphasis will be placed on the development of disease transmission models for human disease occurrence following exposure to pathogens in drinking water in both endemic and epidemic situations. These models will provide a quantitative description of an infectious disease process and will contribute to the analysis of the human risk of infection and illness due to waterborne pathogens in drinking water.

One of the challenges in providing safe drinking water lies in minimizing the risks associated with DBPs while controlling microbial pathogens. In FY 2003, researchers will continue to investigate options for optimizing the simultaneous control of microbial contaminants while minimizing DBP formation by either removing the precursor material or using alternative disinfectants. Work to better understand the effectiveness of various options for controlling pathogens while minimizing DBP formation includes examining source water protection issues for pathogens (e.g., *Cryptosporidium*) and other contaminants. Continuing efforts will also address the special needs of small systems with the goal of developing and demonstrating small-scale, cost-effective treatment technologies for the removal of arsenic that are easily installed.

EPA will also focus research on determining the treatability of microbial and chemical contaminants on the CCL. Distribution system research will target two main risk management options: 1) improving distribution system integrity to prevent contaminant intrusion, backflow and cross-connections from contaminated sources; and 2) improving control of distribution system conditions (e.g., treatment residuals, disinfectant residuals, residence time, mixing, piping materials,

corrosion inhibitors) to minimize formation and release of pathogens and undesirable chemicals. Research will also assess the impact of treatment practices on the quality of water in the distribution system network and on the network itself.

FY 2003 Change from FY 2002

EPM

- (-$21,330,000) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

- (+$613,700) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

S&T

- (-$82,794,000) This reduction reflects the completion of vulnerability assessments and enhancements to emergency response plans in FY 2002 to protect critical water infrastructure for the Nation's 360 largest drinking water systems. This disinvestment also includes a reduction of 10 FTE (-$730,200) associated with these vulnerability assessments.

- (+$15,000,000) Work will involve vulnerability assessments for small to mid-size drinking water systems.

- (-$2,000,000) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

STAG

- (-$220,412,900) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Research

S&T

- (+$4,000,000) These redirected resources from within Goal 2, Objective 1 will address drinking water research needs in the areas of health effects, exposure, risk assessment and risk management for microbial pathogens, and contaminants listed on the current CCL or those with potential to be placed on the CCL of the future.

- (-$4,000,000) These resources will be redirected within Goal 2, Objective 1 from arsenic specific efforts to other drinking water research needs. There will be an offsetting increase in arsenic specific research funded under Goal 8, Objective 4 as part of the National Environmental Technology Competition (NETC), which will foster the adoption of cost-effective treatment technologies for arsenic in small community drinking water systems through a competitive award process.

- (+$1,950,000) These resources will support arsenic specific research and development efforts on more cost-effective treatment technologies for the removal of arsenic from small community drinking water systems. This work will include strategies for the acceptable control of water treatment residuals enriched with arsenic.

- (+$1,317.6, +12.0 FTE) Resources will be redirected within the Objective to conduct work on the drinking water Contaminant Candidate List microbial agents. Planned research related to homeland security will conclude in FY 2002.

- (-$1,317.6, -12.0 FTE) Planned research related to homeland security in the areas of Water Supply Security and the qualitative analysis of biological agents will conclude in FY 2002. Resources will be redirected to conduct work on the drinking water Contaminant Candidate List microbial agents.

- (+$292,200, +3.2 FTE) The shift of workyears from Goal 2, Objective 3 to Goal 2, Objective 1 will assist in developing and improving methods to detect and measure microbes (e.g., CCL-related microbes) and developing analytical methods for the detection and enumeration of viral, bacterial, and protozoan pathogens associated with waterborne disease.

- (+$62,000, +0.3 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.

- (-$7,800,100) The FY 2003 Request is $7,800,100 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

- (-$199,500) Resources in support of conducting laboratory microcosm or mesocosm studies to obtain data on the transport and survival of viruses in the subsurface using human enteric

viruses are realigned to Goal 1, Objective 2, Reduce Emissions of Air Toxics for the purpose of developing additional dose-response assessments for mobile source air toxics.

Annual Performance Goals and Measures

Safe Drinking Water

In 2003 85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in or after 1998

In 2003 92% of the population served by community water systems will receive drinking water meeting all health-based standards in effect as of 1994, up from 83% in 1994

In 2003 93 percent of the population served by non-community, non-transient drinking water systems will receive drinking water for which no violations of Federally enforceable health standards have occurred during the year, up from 88% in 1994

In 2002 85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in 1998.

In 2002 91 percent of the population served by community water systems will receive drinking water meeting all health-based standards, up from 83% in 1994.

In 2002 93 percent of the population served by non-community, non-transient drinking water systems will receive drinking water for which no violations of Federally enforceable health standards have occurred during the year, up from 88% in 1994.

In 2001 91 percent of the population served by water systems received drinking water meeting all health-based standards that were in effect as of 1994

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
Population served by non-community, non-transient drinking water systems with no violations during the year of any Federally enforceable health-based standards that were in place by 1994	92	93	93	% population	
Percent of population served by community drinking water systems with no violations during the year of any Federally enforceable health-based standards that were in place by 1994.	91	91	92	% Population	
Population served by community water systems providing drinking water meeting health-based standards promulgated in or after 1998		85	85	% Population	

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

Drinking Water Systems Operations

In 2003 Enhance homeland security by securing the nation's critical drinking water infrastructure

In 2003 Enhance protection of tribal health by increasing the percentage of tribal community and non-community water systems that are run by certified operators

In 2003 Protect human health and ensure compliance with health-based drinking water standards through use of the Drinking Water State Revolving Fund (DWSRF)

In 2002 Enhance homeland security by securing the nation's critical drinking water infrastructure

In 2002 Enhance protection of tribal health by increasing the percentage of tribal community and non-community water systems that are run by certified operators

In 2002 Protect human health and ensure compliance with health-based drinking water standards through use of the Drinking Water State Revolving Fund (DWSRF).

In 2001 69% of tribal community and non-transient non-community water systems have a certified operator.

In 2001 Protected human health and ensured compliance with health-based drinking water standards by initiating 822 DWSRF operations and having 1,876 assistance agreements to community and non-community drinking water systems

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
DWSRF assistance agreements to community and non-community drinking water systems (cumulative)	1876	2,400	3,000	Agreements
Tribal community and non-transient non-community water systems with a certified operator	69%	70%	73%	Water systems
Percent of the population served by, and the number of medium-sized (10,001 - 100,000 served) community water systems that have completed or are conducting vulnerability assessments.			100%/3,416	% pop/systems
Percent of the population served by, and the number of, small (fewer than 10,000 served) community water systems that have completed or are conducting vulnerability assessments.			50%/25,100	% pop/systems
DWSRF projects that have initiated operations. (cumulative)	822	1,100	1,600	Projects

Baseline: In FY99, there were 792 DWSRF assistance agreements to community and non-community drinking water systems. DWSRF projects will begin to initiate operations in 2000 As of 1999, 56% of tribal community and non-transient non-community water systems had certified operators.

Rules for High-Risk Contaminants

In 2003 Ensure public health protection by identifying and studying potentially harmful contaminants in drinking water and developing, issuing, and revising regulations and/or guidance to limit exposure to contaminants found to be harmful to people.

In 2002 Expand public health protection through 1) promulgating or proposing new regulations; 2) reviewing existing regulations of potentially harmful contaminants, and 3) developing guidance and proposed regulations of potentially harmful contaminants.

In 2001 Expanded public health protection through the promulgation of arsenic, radionuclides, filter backwash, and made 9 determinations whether or not to regulate potentially harmful contaminants from the CCL

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of health risk assessments started/completed for contaminants that are potentially harmful to people.	9			Assessments
Regulatory determinations for potentially harmful contaminants	5			Determinations
Number of regulations and associated technical guidance documents promulgated.		1 / 4		Reg / Guide
Number of regulations and associated technical guidance documents proposed.		2 / 6		Reg / Guide
Number of regulations and associated technical guidance documents proposed/promulgated			2/1	Regs/guidances
Regulations promulgated/proposed	3			Regulations

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

Underground Injection Well Management

In 2003 Target implementation of UIC regulations to ensure low risk of contamination to source water resources

In 2002 Target implementation of UIC regulations to ensure low risk of contamination to source water resources

In 2001 Through the UIC program, EPA contributed to the protection of ground water sources of drinking water from potential endangerment by bringing 11,266 Class IV/V wells under specific controls through permits or closure

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
States that have formally adopted the Class V rule.	8			States
Class IV/V wells (by well type) brought under specific controls through permits or closures.	11,266			Wells
Issue proposed Phase 2 UIC Class V regulatory action.	1			Action
Percentage of Class I, II, & III wells out of compliance with a permit and/or rules authorized that are returned to compliance.		90		% Wells
Number of large capacity cesspools closed. (Class V)		125		Cesspools
Number of motor vehicle disposal wells closed and/or permitted (Class V)		325	400	Wells
Percentage of underground injection wells out of compliance with a permit and/or rule authorized that are returned to compliance in an appropriate and timely manner. (Classes I, II, and III only)			90	% wells
UIC wells plugged as a direct action by the UIC program or indirectly by another program working in partnership with UIC to protect ground water sources of drinking water	2,766			Wells

Baseline. As of January 2000, no states had adopted the Class V Rule as the Rule was just finalized in December 1999.

River/Lake Assessments for Fish Consumption

In 2003 Reduce consumption of contaminated fish by increasing the information available to States, Tribes, local governments, citizens, and decision-makers.

In 2002 10% of the nation's river miles and 26% of nation's lake acres will have been assessed to determine if they contain fish and shellfish that should not be eaten or should be eaten in only limited quantities

In 2001 9% of the nation's river miles and 23% of nation's lake acres have been assessed to determine if they contain fish and shellfish that should not be eaten or should be eaten in only limited quantities

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Lake acres assessed for the need for fish advisories and compilation of state-issued fish consumption advisory methodologies. (cumulative)	23	26	29	% lake acres
States/Tribes monitoring and conducting assessments based on the national guidance to establish nationally consistent fish advisories.	40/41	40	45	States/Tribes
River miles assessed for the need for fish consumption advisories & compilation of state-issued fish consumption advisory methodologies (cumulative)	9	10	11%	River miles

Baseline In 1999, 7% of the Nation's rivers and 15% of the Nation's lakes were assessed to determine if they contained fish that should not be eaten or should be eaten in only limited quantities In September 1999, 25 states/tribes are monitoring and conducting assessments based on the national guidance to establish nationally consistent fish advisories In the upcoming 2000 Report to Congress on the National Water Quality Inventory, 69% of assessed river and stream miles, 63% of assessed lake, reservoir, and pond acres; and 53% of assessed estuarie square miles supported their designated use for fish consumption For shell fish consumption, 77% of assessed estuary square miles met this designated use

Increase Information on Beaches

In 2003 Reduce human exposure to contaminated recreation waters by increasing the information available to the public and decision-makers

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

In 2001 Reduce exposure to contaminated recreation waters by providing information on 2,354 beaches for which monitoring and closure data is available to the public and decision-makers.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Beaches for which monitoring and closure data is available to the public at http://www.epa.gov/OST/beaches/. (cumulative)	2,354	2,354	2,450	Beaches
Number of eligible States that have started/completed development of monitoring and notification programs consistent with the BEACHES legislation			15/5	States

Baseline: By the end of FY1999, 33 states had responded to EPA's first annual survey on state and local beach monitoring and closure practices, and EPA made available to the public via the Internet information on conditions at 1,403 specific beaches In the upcoming 2000 Report to Congress on the National Water Quality Inventory, 72% of assessed river and stream miles, 77% of assessed lake, reservoir, and pond acres, and 85% of assessed estuarie square miles met their designated uses for recreation (primary contact).

Source Water Protection

In 2003 39,000 community water systems (representing 75% of the nation's service population) will have completed source water assessments and 2,600 of these (representing 10% of the nation's service population) will be implementing source water protection programs

In 2002 Advance States' efforts to protect their surface and ground water resources that are sources of drinking water supplies

In 2001 States and community water systems increase efforts and programs to protect their source water resources, including ground water

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Population served by community water systems that are implementing efforts to protect their source water resources				People
CWSs implementing efforts to protect their source water resources	2,026			CWSs
Number of community water systems (CWSs) that have completed their source water assessments		6,000		CWSs
Percent of population served by community water systems (CWSs) that have completed their source water assessments		11		% Population
Number of community water systems (CWSs) that are implementing source water protection programs.		2,000		CWSs
Percent of population served by community water systems (CWSs) that are implementing source water protection programs		4		% Population
Number of community water systems and percent of population served by those CWSs that have completed their source water assessments			75%/39,000	Percent/systems
Number of community water systems and percent of population served by those CWSs that are implementing source water protection programs.			10%/2,600	% pop/systems

Baseline EPA has defined implementation as undertaking 4 or more of 5 stages of source water protection Nearly 264 million people are estimated to be served by CWSs in 2001

Research

Drinking Water Research

In 2003 The Office of Water will have data, methods, assessments, and technology evaluations necessary to make scientifically sound risk assessment and risk management decisions on unregulated drinking water contaminants of potential public health concern

In 2002 Produce reports on the assessment and control of risks associated with exposure to microbes and disinfection by-products (DBPs) This information will support scientifically sound regulatory decisions for microbes and DBPs, enhancing EPA's ability to protect drinking water supplies

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

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Report on occurrence of CCL-related pathogens in source and drinking water, such as mycobacterium and Aeromonas	1			report
Publish screening treatability studies for at least two microbes on the Candidate Contaminant List (CCL) to determine if these contaminants are effectively inactivated by conventional treatment.	2			studies
Assess risks from caliciviruses and Cryptosporidium as a function of dose and host susceptibility Will aid in evaluating treatment approaches to prevent disease		2		reports
Develop process-design recommendations for control of Cryptosporidium and DBPs in ozone/chloramine treated waters.		1		report
Produce a report on waterborne disease outbreaks in the U S in 1999-2000, which will provide information on causative agents, health effects, water quality and treatment issues		1		report
Report on the occurrence of chemical by-products from alternative drinking water disinfection processes in water treatment systems.		1		report
Report on the potential health risks associated with three CCL microbial pathogens.			1	report
Provide method(s) for CCL related pathogens in drinking water for use in the Unregulated Contaminant Monitoring Rule.		1		journal article
Develop methodology to identify and characterize H pylori, Cyclospora, caliciviruses and sources of human pathogens in water.			1	method
Publish a technical report on treatability of three chemicals in the 1998 Contaminant Candidate List to provide information to the program office for use in the regulatory determination			1	report
Report on waterborne disease in the young and elderly in Washington State community intervention study.			1	report
Provide report on hazard and risk characterization issues for potentially susceptible subpopulations for chemicals on the Contaminant Candidate List			1	report

Baseline The Safe Drinking Water Act Amendments of 1996 establish a process and timeline for EPA to make decisions about the regulation of waterborne pathogens and chemicals for which standards have not been previously established The ability of EPA to identify potential candidates for regulation and to make scientifically sound regulatory decisions is dependent upon the availability of adequate information concerning the assessment and control of these contaminants The current list of unregulated microbes and chemicals, called the Contaminant Candidate List (CCL), includes over 60 contaminants. The quality

and robustness of the data base on health effects, exposure and treatability of these contaminants is highly variable Some microorganisms on the CCL, for example, lack suitable analytical methods that are necessary for determining their viability and occurrence in drinking water samples Basic information on the health effects of selected CCL chemicals are lacking, and the ability of conventional treatment technologies to remove or inactivate some of the contaminants has not been clearly established Research conducted in support of this APG will provide new health effects and exposure data, analytical methods, risk assessments and technological evaluations on several high priority pathogens and chemicals This will strengthen the scientific foundation for the next CCL and for future regulatory determinations on these contaminants

Verification and Validation of Performance Measures

Performance Measure: Population served by community water systems with no violations during the year of any Federally-enforceable health-based standards that were in place by 1994 and Population served by community water systems that will receive drinking water meeting health-based standards promulgated in 1998.

Performance Database: Safe Drinking Water Information System (SDWIS or SDWIS-FED)

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

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

Data Quality Review: Quality assurance (QA) audits of the Office of Ground Water and Drinking Water's QA/QC processes, including those for SDWIS, are carried out every three years. This effort is coordinated by the QA division. EPA last completed a quality assurance audit in July 1999 and will complete a QA audit for 1999-2001 data in FY 2002. SDWIS was identified as an Agency weakness in the Fiscal Years 1999 and 2000 Federal Managers' Financial Integrity Report. The Data Reliability Action Plan (described below), developed and implemented to address corrective actions identified in 1999, for SDWIS was completed by the end of FY 2001. However, EPA/states/stakeholders have expanded on this Plan through the development of an Information Strategy. This strategy, which could be considered Phase II of the Data Reliability Action Plan, sets the direction for a comprehensive modernization of SDWIS over the next three to five years.

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

Recent state data verification and other quality assurance analyses indicate that the most significant data quality problem is under-reporting to EPA of both monitoring and reporting violations and incomplete inventory characteristics. Monitoring and reporting violations are not included in the health based violation category; however, failures to monitor could mask treatment

technique and MCL violations. The incomplete inventory data limit EPA's ability to: 1) accurately quantify the number of sources and treatments applied, 2) undertake geo-spatial analysis, and 3) integrate and share data with other data systems.

New/Improved Data or Systems: Using a newly-developed information strategy developed by EPA in partnership with the states and major stakeholders, several improvements to SDWIS are underway.

First, EPA will continue to work with states to implement the Data Reliability Action Plan (DRAP), a multi-step approach to improve the quality and reliability of data in SDWIS. The DRAP already has improved the completeness, accuracy, and timeliness of the data in SDWIS through: 1) training courses for SDWIS data entry, error correction, and regulation-specific compliance determination and reporting requirements, 2) specific DRAP analyses, follow-up activities and state-specific technical assistance, and 3) web-enabling SDWIS-STATE for easier data entry by the states.

Second, more states will be using SDWIS-STATE, a software information system jointly designed by states and EPA, to support states as they implement the drinking water program. SDWIS-STATE is the counterpart to EPA's Federal drinking water information system, SDWIS-FED, and employs the same edit criteria and enforces the same mandatory data elements. If the SDWIS-STATE system is fully utilized by a state, the information it holds meets EPA's minimum data requirements and can easily be reported to EPA, thereby eliminating data conversion errors and improving data quality and accuracy. In addition, a web-enabled version of SDWIS-STATE and a data migration application that can be used by all states to process data for upload to SDWIS-FED, are currently being developed. By the end of 2003, EPA estimates that 40 states will be using SDWIS-STATE for data collections.

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

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

Performance Measure: Cumulative number of beaches for which monitoring and closure data is available to the public at http://www.epa.gov/OST/beaches/, and number of eligible states that have started/completed development of monitoring and notification programs consistent with the BEACH Act of 2000.

Performance Database: National Health Protection Survey of Beaches Information Management System. The database includes fields identifying the beaches for which monitoring and notification

information is available. The database also identifies those states that have received a BEACH Act grant. This information is updated annually.

Data Source: State and local governments

QA/QC Procedures: A standard survey form has been approved by OMB which is distributed by mail in hard copy and is available on the Internet for electronic submission. Where data is entered over the Internet, a password is issued to ensure the appropriate party is completing the survey. Those states receiving a BEACH Act grant are subject to the Agency's grant regulations at 40CFR 31.45 which require states and Tribes to develop and implement quality assurance practices for the collection of environmental information; these procedures will help assure data quality.

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

Data Limitations: Participation in this survey and collection of data is mostly voluntary. While the voluntary response rate has been high, it does not capture the complete universe of beaches. Participation in the survey will become a mandatory condition of grants awarded under the BEACH Act program (described below); however, state and local governments are not required to apply for a grant. Currently the Agency has data standards but procedures, methods, indicators, and thresholds can vary between jurisdictions because to date this has been a voluntary program. The Agency expects the limitations to diminish as more states apply for BEACH Act grants.

New/Improved Data or Systems: With the passage of the BEACH Act of 2000, the Agency is authorized to award grants to states to develop and implement monitoring and notification programs consistent with Federal requirements. As the Agency awards these grants, it will require standard program procedures, sampling and assessment methods, and data elements for reporting. To the extent that state governments apply for and receive these grants, the amount, quality, and consistency of available data will improve. In addition, the BEACH Act requires the Agency to maintain a database of national coastal recreation water pollution occurrences. The Agency will fulfill this requirement by revising the current database to include this new information. In revising the database, the Agency will be investigating modes for electronic exchange of information and reducing the number of reporting requirements.

Performance Measure: Cumulative lake acres assessed for the need for fish advisories and compilation of state/Tribal-issued fish consumption advisory methodologies; Cumulative River miles assessed for the need for fish consumption advisories and compilation of state/Tribal-issued fish consumption advisory methodologies; states/Tribes monitoring and conducting assessments based on the national guidance to establish nationally consistent fish advisories.

Performance Database: National Listing of Fish and Wildlife Advisories. The database includes fields identifying the waters for which fish consumption advisories have been issued. The EPA Total Waters database is used to calculate sizes for fish advisories. This information is updated

continually as states and Tribes issue or revise advisories. Data are also available describing methodologies used by states and Tribes for establishing advisories.

Data Source: State and Tribal governments

QA/QC Procedures: A standard survey has been approved by OMB which is available on the Internet for electronic submission. A password is issued to ensure the appropriate party is completing the survey. EPA has national guidance for states and Tribes to use for develop and implement quality assurance practices for the collection of environmental information for the purposes of establishing and managing fish advisories. This guidance helps assure data quality.

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

Data Limitations: Participation in this survey and collection of data is voluntary. While the voluntary response rate has been high, it does not capture the complete universe of advisories.

New/Improved Data or Systems: A proposed enhancement to the system is the use of a GIS procedure to calculate the sizes of georeferenced advisories based on the National Hydrography Dataset (NHD). This procedure will provide size information for the vast majority of waterbody-specific advisories. In cases where the state has already provided information, the state's sizes will be retained rather than replaced with results from the NHD calculations.

Coordination with Other Agencies

The 1996 SDWA amendments include a provision that mandates a joint EPA/Centers for Disease Control (CDC) study of waterborne diseases and occurrence studies in public water supplies. CDC is involved in assisting EPA in training health care providers (doctors, nurses, public health officials, etc.) on public health issues related to drinking water contamination and there is close CDC/EPA coordination on research on microbial contaminants in drinking water. EPA has in place a Memorandum of Understanding (MOU) and Interagency Agreement (IAG) with the CDC in the Department of Health and Human Services (DHHS) to implement this provision.

In implementing its source water assessment and protection efforts, the Agency coordinates many of its activities with other Federal agencies. There are three major areas of relationships with other agencies concerning source water assessments and protection.

Land management involves coordinating with the Department of Agriculture's (USDA's) Forest Service; the Department of Interior's (DOI) National Park Service and Bureaus of Land Management and Reclamation; the Department of Defense's (DOD's) facilities management and operations units; and the U.S. Postal Service (USPS) to address unified policy on Federal land management within source water areas.

Public Water Systems (PWSs). Some Federal agencies, i.e., USDA (Forest Service), DOD, Department of Energy, DOI (National Park Service), and USPS, own and operate public water systems. EPA's coordination with these agencies focuses primarily on ensuring that they cooperate with the states in which their systems are located, and that they are accounted for in the states' source water assessment programs as mandated in the 1996 amendments to the SDWA.

Data Availability, Outreach and Technical Assistance. EPA coordinates with USGS (US Geological Survey), USDA (Forest Service, Natural Resources Conservation Service, Cooperative State Research, Education, and Extension Service (CSREES), Rural Utilities Service); DOT, DOD, DOE, DOI (National Park Service and Bureaus of Indian Affairs, Land Management, and Reclamation); DHHS (Indian Health Service) and the Tennessee Valley Authority.

Collaboration with USGS. EPA and USGS have identified the need to engage in joint, collaborative field activities, research and testing, data exchange, and analyses, in areas such as the occurrence of unregulated contaminants, the environmental relationships affecting contaminant occurrence, evaluation of currently regulated contaminants, improved protection area delineation methods, laboratory methods, and test methods evaluation. EPA has an IAG with USGS to accomplish such activities.

The Agency also has in place an "umbrella" IAG that serves as the framework for coordinating the various source water-related activities in these many Federal departments and agencies.

The Agency works closely with other Federal and state agencies to assure the protection of human health from contaminated fish and shellfish and contaminated recreational waters. For example, EPA is working with the Food & Drug Administration to assure the consistency of public messages about the risks of eating both commercial and non-commercial fish and shellfish that are contaminated. EPA works with the Agency for Toxic Substances and Disease Registry (ATSDR) and CDC to learn more about health effects of these types of exposure. The Agency works with ATSDR, National Academy of Sciences (NAS), National Oceanic and Atmospheric Administration, and Endocrine Disruptor Screening and Testing Advisory Committee to identify and characterize hazardous pollutants, including endocrine disruptors, and develop criteria for states to use in establishing water quality standards and developing TMDLs. EPA cooperates with the Departments of the Army, Interior, Agriculture and the National Oceanic and Atmospheric Administration to manage the risks associated with contaminated sediments, which are the major sources of contamination of fish. EPA also cooperates with the NAS to develop a candidate list or set of appropriate and scientifically defensible indicators or approaches to source water protection.

Research

While EPA is the Federal agency mandated to assure safe drinking water, other Federal and non-Federal entities are conducting research that complements EPA's research program on priority contaminants in drinking water. For example, health effects and exposure research is being conducted by the Centers for Disease Control and Prevention (CDC) and the National Institute of Environmental Health Sciences (NIEHS). Research related to children's risk is also being

conducted by the Food and Drug Administration (FDA). Many of these research activities are being conducted in collaboration with EPA scientists. The private sector, particularly the water treatment industry, is conducting research in such areas as analytical methods, treatment technologies, and the development and maintenance of water resources. A Microbial/Disinfection By-Product Research Council was established in 1995 with the American Water Works Association Research Foundation (AWWARF) and other stakeholder groups to coordinate research on microbial pathogens and DBPs. EPA is also working with the U.S. Geological Survey (USGS) to evaluate the performance of newly developed methods for measuring microbes in potential drinking water sources.

EPA signed a four-year IAG with the Department of Defense to evaluate and improve intelligent systems technology (e.g., sensors incorporated into structural materials, correlation of sensor output with structural integrity and residual service life) that allows for real-time measurement of the structural condition of infrastructure. This information will provide the basis for optimizing maintenance planning, thereby reducing infrastructure replacement costs and preventing infrastructure failures and their attendant health, environmental, and economic hazards.

Interactions with external stakeholder groups have been initiated that will help determine EPA's future regulatory priorities and research needs for drinking water. Interactions with the Science Advisory Board's Drinking Water Committee and the National Drinking Water Advisory Committee will also help EPA to formulate its drinking water research agenda.

Statutory Authorities

Safe Drinking Water Act
Clean Water Act
Toxic Substances Control Act

Research

Safe Drinking Water Act
Clean Water Act
Toxic Substances Control Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Clean and Safe Water

Objective: Protect Watersheds and Aquatic Communities

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Protect Watersheds and Aquatic Communities	**$448,020.6**	**$463,061.1**	**$435,814.7**	**($27,246.4)**
Environmental Program & Management	$193,598.5	$189,431.4	$162,894.0	($26,537.4)
Hazardous Substance Superfund	$0.0	$28.8	$25.7	($3.1)
Science & Technology	$36,625.8	$41,478.8	$38,592.9	($2,885.9)
State and Tribal Assistance Grants	$217,796.3	$232,122.1	$234,302.1	$2,180.0
Total Workyears	959.7	980.2	988.8	8.6

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$1,558.8	$0.0	$0.0	$0.0
Chesapeake Bay	$20,728.0	$20,551.8	$20,650.8	$99.0
Congressionally Mandated Projects	$47,558.1	$33,107.4	$0.0	($33,107.4)
Ecosystems Condition, Protection and Restoration Research	$36,006.0	$37,785.0	$38,592.9	$807.9
Facilities Infrastructure and Operations	$15,814.9	$13,213.9	$13,851.3	$637.4
Great Lakes	$3,114.4	$2,671.0	$2,684.7	$13.7
Gulf of Mexico	$4,341.2	$4,261.6	$4,327.4	$65.8
Lake Champlain	$1,995.6	$954.8	$954.8	$0.0
Legal Services	$3,019.0	$3,462.8	$3,755.0	$292.2
Long Island Sound	$4,989.0	$2,500.0	$477.4	($2,022.6)
Management Services and Stewardship	$3,571.1	$4,222.7	$4,571.2	$348.5
Marine Pollution	$8,198.5	$7,994.8	$8,170.7	$175.9
National Estuaries Program/Coastal Watersheds	$20,151.9	$24,521.3	$19,246.2	($5,275.1)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Pacific Northwest	$1,078.6	$1,003.8	$1,028.5	$24.7
Regional Management	$370.2	$429.0	$450.5	$21.5
South Florida/Everglades	$2,942.0	$2,648.3	$2,665.5	$17.2
State Pollution Control Grants (Section 106)	$169,887.7	$192,476.9	$180,376 9	($12,100.0)
State Water Quality Cooperative Agreements	$18,958.2	$18,958.2	$38 958 2	$20,000.0
State Wetlands Program Grants	$14,967 0	$14,967 0	$14,967 0	$0.0
TMDLs	$20,594.5	$21,232.1	$21,433 2	$201.1
Water Quality Criteria and Standards	$19,515 2	$18,782 4	$19,127 2	$344 8
Water Quality Monitoring and Assessment	$11,811.0	$11,665.1	$11,967 7	$302.6
Watershed Assistance	$8,467.8	$7,821.6	$9,479 1	$1,657.5
Wetlands	$17,651.0	$17,829.8	$18,381 9	$552.1

FY 2003 Request

EPA, in concert with other Federal natural resource agencies, continues to pursue a comprehensive strategy for assessing and restoring the nation's most impaired watersheds to achieve healthy aquatic communities and attain clean water and public health goals. Fundamental to the Agency's efforts to meet this objective 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. EPA's ability to meet this objective depends on the success of regulatory and non-regulatory programs and nationwide efforts to implement a broad range of policy, planning, and scientific tools to establish local goals and assess progress. To that end, the Agency will continue to work with states and Tribes to carry out their Total Maximum Daily Load (TMDL) programs to identify those waters not meeting clean water goals, help restore impaired watersheds, and to meet the many court-supervised deadlines for completing TMDLs. EPA will provide up-to-date scientific tools (such as water quality criteria, biological criteria, nutrient criteria, and easy-to-use, geographically-based models), training, and technical assistance to support state and Tribal TMDL programs. Section 303(d) requires that approvable lists of impaired waters be submitted in a timely manner and EPA will work to ensure that TMDLs are developed at an appropriate pace.

The Agency will continue to support comprehensive water quality assessments that establish baselines against which to gauge progress toward objectives and goals and support decision-making necessary to implement watershed restoration activities on a priority basis. This work will include working with the states to enhance their monitoring and assessment programs to support water quality decision-making. The Agency will continue to work with its state and Tribal partners to establish and maintain water quality standards and monitoring and assessment programs appropriate to their identified goals and needs, including addressing the elements outlined in EPA's monitoring and assessment guidance and Clean Water Act (CWA) Section 303(d) requirements. EPA will assemble and report state water quality assessments and will continue to help states consolidate their water quality reporting under sections 303(d) and

305(b). EPA is integrating its programs for characterizing, assessing and monitoring the condition of the nation's waters. EPA ensures that states and Tribes are entering relevant water quality and related data into EPA's modernized national data Storage and Retrieval System (STORET); we will also work with other Federal agencies to increase their use of STORET. An important use of state comprehensive water quality assessment programs and other data is making that data available not only to decision- makers, but also to the public.

One part of this effort is a highly detailed map of waters of the United States contained within the National Hydrography Database. Geographic layers of data, interacting with up-to-date databases, are being developed for a variety of areas including 303(d) listed waters, water quality standards, and National Pollutant Discharge Elimination System (NPDES) discharges. STORET data will also be accessible on a watershed-basis. The new Watershed Assessment, Tracking and Environmental Results System (WATERS) unifies key water quality information, including water quality standards and status of impaired waters, and allows users to map the results for specific geographic areas.

EPA, in concert with the U.S. Department of Agriculture (USDA), Department of Interior (DOI) and other Federal agencies, will work with the states, Tribes and territories to implement watershed restoration projects. Working through the National Water Quality Monitoring Council, EPA is analyzing state and Federal water quality monitoring and assessment programs to quantify the improvements of these restoration projects.

Critical to improving water quality is our refinement of water quality standards. The Agency will continue to support states and Tribes in incorporating risk analyses, priority setting, and risk management decisions, and in state/Tribal adoption and implementation of water quality standards based on revised criteria. The Agency will continue to enhance Better Assessment Science Integrating Point and Nonpoint Sources (BASINS), a powerful geographic information system which links projected nonpoint source runoff with point source discharges, to access information on the Internet and thus enable TMDL developers and NPDES permit writers to use the most current information to better address site-specific conditions. The Agency will also provide training to state and EPA staff to utilize BASINS in establishing TMDLs and issuing NPDES permits.

EPA will work with its state partners to ensure that they adopt into their standards of criteria to protect designated uses into their standards. In 2003, the Agency will continue to develop and publish scientifically defensible criteria for a broad range of stressors and assist states and Tribes in adopting these criteria to protect public health, attain and maintain aquatic life and other designated uses, and improve the chemical, physical, and biological integrity of the Nation's waters. EPA will accelerate the adoption of biological criteria, designed to control nutrients and disease-causing microorganisms, into state and Tribal water quality standards by developing needed guidance materials and supporting state/Tribal program implementation. The Agency will also continue to develop and enhance PC-based modeling software to support site-specific metals criteria and non-point source loadings.

In July 1997, the U.S. District Court issued a ruling whereby state water quality standards do not go into effect under the CWA until approved by EPA. The Agency is devoting significant effort to reduce the backlog of approval actions waiting to be taken on states' proposed water quality standards. In 2003, EPA will continue to implement strategies necessary to take action on state water quality standards within the statutory deadlines. In support of this effort, the Agency will continue to make available and expand on the Internet a comprehensive repository of state water quality standards that will help ensure nationwide consistency in state programs and support timely action on states' proposed water quality standards.

In watersheds where sediment contamination is determined to be widespread, especially in the Great Lakes Region, the Agency will continue to help states and Tribes evaluate sediment quality, make decisions about appropriate control measures, and implement new methodologies that address a wider range of pollutants. The Agency will also continue to maintain the National Sediment Inventory for the purposes of preparing the next biennial report to Congress on contaminated sediments.

The Agency will continue to implement its Nutrient Strategy, employ states and Tribes in filling data gaps, and address implementation issues related to controlling nutrient levels that can lead to eutrophication, and are associated with harmful algal blooms and other public health concerns. Since the process for assessing and controlling eutrophication is considered to be Regional in nature, the best assistance will involve the states and Tribes in choosing the tools that best fit their conditions (waterbody type-specific guidance). The Agency will publish technical ecoregional guidance documents for nutrient indicator variables (e.g., total nitrogen, total phosphorus, chlorophyll-a, and clarity) and help states and Tribes tailor their nutrient criteria to their waterbody types and geographical Regions. EPA will award grants to states, local governments, and Tribes to help them implement Regional nutrient criteria and biological criteria. The Agency will further help them develop and adopt appropriate water quality standards.

In support of the Agency's Tribal partnership efforts, the Agency will continue to help train Tribes on basic water programs, including nonpoint source, watershed management, water quality monitoring, and water quality standards and criteria. The Agency will continue distribution of a National Tribal Watershed Assessment Framework to support defensible, reproducible Tribal assessments of the conditions of their watersheds and the sources of watershed impairments.

EPA will continue to help states integrate their watershed assessments and plans, including strategies for watershed restoration, with their ongoing TMDL programs. With EPA assistance, states will continue to accelerate the pace of development of TMDLs for impaired waters in high priority watersheds. Improving monitoring, standards, TMDL development of point source and nonpoint source activities will result in greater state flexibility for targeting TMDL implementation efforts, resulting in more cost-effective and efficient solutions to restore impaired waters. EPA is bound by court orders and consent decrees requiring state TMDL development, with an EPA backstop, for over 20 states in FY2003. EPA will continue to support

the Watershed Academy and its course offerings and technical transfer efforts to better train state, Tribal and local agencies in addressing these watersheds.

In 2003, EPA will increase funding to work with state and Tribal partners to ensure that water quality standards are effective and appropriate for use in developing TMDLs. The National Research Council's 2001 assessment of the TMDL program found that the designated uses and criteria in existing standards often need more detail and refinement before they can be used as a firm basis for requiring load reductions through TMDLs. Standards also may not protect drinking water sources adequately, and may not reflect biological assessments and criteria. To address these concerns and to implement the strategy, EPA will provide technical guidance and training that will help states and Tribes conduct their own use attainability analyses, and to help refine and interpret standards to ensure they are adequate for use in developing load reduction targets. In addition, EPA conducted a customer-focused review of the National Water Quality Standards program and developed a long-term strategy that calls for improvements and streamlining in EPA's program. EPA will also accelerate the technical reviews necessary for EPA to approve new or revised state/Tribal standards on a timely basis for use in TMDLs, including the biological evaluations of whether these standards provide adequate protection to endangered species.

EPA will work cooperatively with states to increase integration of basic CWA programs and activities into the watershed management approach, focusing on monitoring, water quality standards, nonpoint source controls, wetlands protection, NPDES permitting, TMDLs, and source water protection. The Agency will work closely with other Federal agencies and partners to integrate relevant programs to ensure a comprehensive approach to the protection and restoration of rivers, lakes, wetlands and coastal waters.

EPA will support the National Estuary Program (NEP) as all 28 estuaries continue to implement their Comprehensive Conservation and Management Plans (CCMPs), including development and application of environmental indicators to assess status and trends in the NEPs, as well as to measure success of implementation of priority action plans in CCMPs, including the addition of 25,000 acres of restored habitat. This increment, while ambitious, is lower than in previous years due to decreasing restoration opportunities following early years' successes. EPA will emphasize and support coastal partnerships to assist local decision-makers in developing and implementing protection programs for coastal watersheds, including assisting local governments in developing and implementing watersheds smart growth principles. EPA will also support: the application of biological criteria; development of research plans and monitoring programs pertaining to coastal waters, ocean dump sites, harmful algal blooms and other marine pests and diseases; coral reef and back-reef protection; vessel discharge issues; invasive species efforts; management and remediation of contaminated sediments; and assessment of water quality impacts of air deposition.

For coastal ports and harbors, EPA will work with Federal and state partners (e.g. the National Dredging Team) and other stakeholders to establish and promote Regional Dredging Teams and local planning groups to help ensure that comprehensive dredged material management plans, including provisions for the beneficial re-use of dredged material, are

developed and implemented to maintain, restore, and improve the health of coastal ecosystems. The Agency will manage pollution sources subject to the Marine Protection, Research, and Sanctuaries Act; CWA; the Marine Plastic Pollution Research and Control Act, and other related programs in such a way as to further protect and enhance our Nation's coastal and ocean waters. This will include development of bioaccumulation risk guidance to enable EPA Regions and Corps of Engineers districts to reach decisions on the suitability of dredged material for open water disposal, development of a guidance document on implementation of cost effective beneficial use projects in the context of watershed planning, designation of dredged material disposal sites, and implementation of site management and monitoring plans. Progress in these areas will depend on sound science derived from improved research and monitoring efforts in coastal and marine waters.

Through our Watershed Assistance Grants, EPA will continue providing small grants to community partnerships working to advance watershed restoration efforts. Priority in allocation of grant assistance will be given to organizations that have the capacity to bring diverse interests together to find creative ways to restore and sustain the health of aquatic systems on a watershed basis. A major focus will be to provide assistance to organizations that are developing partnerships that will engage students, seniors, business owners and employees and others not traditionally involved in water resource issues to participate in ongoing community watershed efforts.

Section 106 grants to states, Tribes, and interstate agencies help fund key programs for the prevention, reduction, and elimination of surface and ground water pollution from point and nonpoint sources and for enhancing the ecological health of the Nation's waters. Within this objective, $180,376,900 is requested for this grant program. Activities within the section 106 program include permitting, water quality planning and standard setting, pollution control studies, assessment and monitoring, and training and public information. State efforts funded by section 106 grants will include activities related to the restoration of impaired watersheds (TMDLs) which will include all facets of this program, i.e., pre TMDL needs such as monitoring and assessment and standards development, development of TMDLs and post-TMDL implementation and restoration; implementing integrated wet weather strategies in coordination with nonpoint source programs; and developing source water protection programs. Tribes will continue to conduct watershed assessments and will maintain and improve their capacity to implement water quality programs through monitoring, assessments, planning, and standards development.

The Agency is requesting $38,958,200 (an increase of $20,000,000) for Water Quality Cooperative Agreements (WQCA). The increased resources will support an effort to implement watershed restoration activities in a limited number of pilot watersheds (described below). Base resources will also provide for continued support in the creation of unique and innovative approaches to address requirements of the NPDES program, with special emphasis on wet weather activities, i.e., storm water, combined sewer overflows, sanitary sewer overflows and animal feeding operations. In the wet weather area, these grants have been invaluable in enabling demonstrations of unique technical, as well as managerial and funding techniques for addressing wet weather problems.

Geographic Initiatives

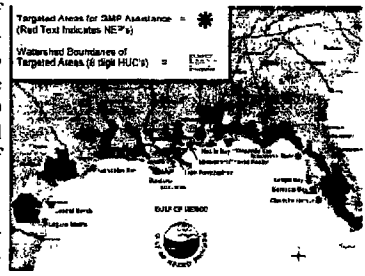
EPA will continue to support targeted geographic watershed initiatives of national importance, including the NEP, the Chesapeake Bay Program, Gulf of Mexico Program (GMP), South Florida/Everglades, and the Pacific Northwest Forest Plan. Special emphasis on these varied Regions provides the opportunity not only to have necessary heightened Federal involvement in critical watersheds, but to develop and implement water quality control practices and other management tools whose successes can be transferred to other watersheds nationwide. EPA is also committed to supporting the Interior Columbia Basin Ecosystem Management Project, the Long Island Sound Office, the Lake Champlain Management Conference and Lake Ponchartrain requirements in the Estuaries and Clean Waters Act of 2000. This Act authorizes EPA to support restoration of the ecological health of the Lake Pontchartrain Basin through development and funding of restoration projects and related scientific and public education programs.

The new Targeted Watersheds Project will provide direct grants to watershed stakeholders ready to undertake immediate action. Modeled after successful existing programs such as the efforts to restore the Charles River, targeted inland and coastal watersheds will be chosen based on criteria established in consultation with state, local and other stakeholder partners, with emphases on value of the resource, likelihood of positive environmental outcomes, evidence of strong state/local government support, ability to leverage agency resources, and readiness to proceed based on existing problem identification. Expected benefits include: additional places and times that waters could be used for boating, fishing, and swimming; restoration, protection, or creation of terrestrial and aquatic habitat; economic benefit (e.g., re-opening shellfish beds, improved public access to waterfronts and other highly valued resource areas); protection of groundwater aquifers; protection and increase in number of acres of open space; and enhanced flood protection.

The Gulf of Mexico

The Gulf of Mexico Program (GMP) is a consortium of organizations working together to initiate cooperative actions by public and private organizations to restore, protect, and maintain the Gulf of Mexico ecosystem in ways consistent with the economic well-being of the Region.

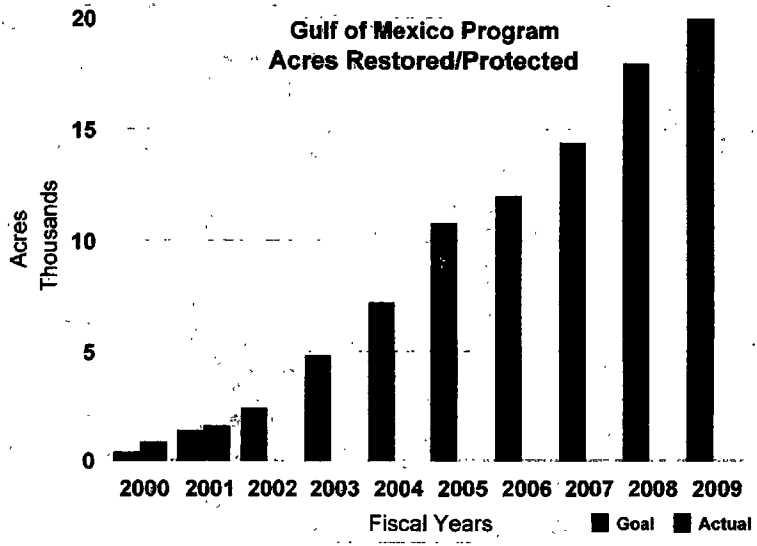
The GMP works closely with the five Gulf States, Gulf coastal communities, citizens, non-government organizations, and Federal agencies to achieve specific environmental results. These include by 2009: assisting the states in restoring over 70 impaired coastal water bodies in 12 priority coastal areas and restoring or protecting 20,000 acres of important coastal and marine habitats.



The GMP provides direct technical and financial assistance to the Gulf States, local governments, and non-profit organizations. In fiscal year 2003, the GMP will focus its efforts on implementing priority projects, as identified by the Gulf States, that will contribute to watershed-based efforts to improve 14 water bodies currently identified as impaired, and to protect, enhance, or restore 2,400 acres of important coastal and marine habitats that are essential for sustaining the Gulf's fisheries.

The Chesapeake Bay

The Chesapeake Bay Program is a partnership between Maryland, Virginia, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission (a tri-state legislative



body), and the EPA, which represents the Federal government. The Bay Program was formed in 1983, and operates in a consensus fashion. The Bay Program has nine subcommittees which focus on specific issue areas (e.g., toxics, nutrients, and communications).

In June 2000, the *Chesapeake 2000* agreement, was signed by the EPA Administrator, the Governors of Maryland, Pennsylvania & Virginia, the Mayor of the District of Columbia, and the chair of the Chesapeake Bay Commission, and is the most comprehensive and far-reaching agreement in the Bay Program's history. The primary goal of the new agreement is to remove nutrient and sediment impairments sufficiently to sustain the living resources of the Chesapeake Bay and its tidal tributaries and to maintain that water quality into the future. This will mean setting increased nutrient reduction goals and for the first time setting sediment reduction goals Baywide.

The agreement has five sections containing commitments to protect and restore living resources, vital habitats, and water quality through sound land use by promoting stewardship and engaging communities throughout the 64,000 square mile watershed. The agreement is designed to build on past restoration actions and will continue all Bay Program commitments outlined in previous agreements or Executive Council directives.

Wetlands

In April 2001, President Bush endorsed regulations to protect wetlands and the Administration committed to "continue to take responsible steps to ensure that we can preserve these vital natural resources for future generations of Americans." EPA and other Federal agencies are working with partners towards the national goal of an annual net gain of wetlands of 100,000 acres by 2005. This will reverse historic trends of wetland losses and restore some of the 54 percent of the nation's wetlands already drained or filled. EPA will contribute to this wetlands quantity goal by helping to improve compensatory mitigation success, supporting wetlands restoration efforts, and building state and Tribal capacities to monitor and protect wetland resources.

Working with other Federal agencies, EPA and the Corps of Engineers will implement Section 404 of the CWA to protect wetlands, free-flowing streams, and shallow waters in a fair, flexible, and effective manner. Program improvements will be implemented to ensure program activities are effectively and consistently applied under the CWA. EPA and the Corps will advance the regulatory program goal of no overall net loss of wetlands by improving the environmental success rate of mitigation projects to offset unavoidable losses of wetlands and will be implementing recommendations from the National Academy of Sciences and GAO Reports that were released in 2001.

EPA will also take steps to advance the national goal of an increase in the quality of wetlands. Many remaining wetlands are degraded by stressors including polluted run-off, changes in hydrology, invasive species, and habitat fragmentation. Information on the health of wetlands is important to set priorities and to identify corrective actions. Building upon successful projects in a number of states, EPA will help states and Tribes develop programs to

monitor the extent and condition of their wetlands. Biological indicators will be used to evaluate the relative health of wetlands to determine the extent and causes of disturbance. EPA will provide technical assistance and training in low-cost monitoring techniques, including volunteer monitoring and remote imagery. The information collected will guide management decisions to evaluate restoration success and to improve the quality of wetlands.

A total of $14,967,000 from the state and Tribal Assistance Grants appropriation is requested to enable states, Tribes and local governments to develop and strengthen their programs to conserve, manage and restore wetlands. This will support regulatory approaches as well as incentive-based programs, training, and monitoring. EPA will also provide assistance for projects that restore wetlands and rivers with an emphasis on community-level education.

Research

The health and sustainability of aquatic ecosystems and their ecological components are affected by various types of chemical, biological, and physical stressors. There is significant scientific uncertainty associated with the resiliency of aquatic ecosystems and their biotic components. Research in this objective will demonstrate integrated and stake-holder driven approaches to achieving water quality goals, as well as focus on the development of watershed diagnostic methods, on understanding the importance of critical habitats, and on the impacts of habitat alteration on aquatic communities. In addition, this research will provide the scientific foundation to support Total Maximum Daily Loads (TMDLs). The critical stressors studied under this research program correspond to the Clean Water Act (CWA) Section 101(d) listing of stressors that contribute to water quality impairment. These include: nutrients, sediments; suspended solids, pathogens, toxic chemicals, and habitat alteration.

In FY 2003 EPA research on diagnostic methods will focus on the causes of biological and aquatic ecosystem impairment. This work will be useful in deriving criteria to protect and strengthen the biological basis for designated uses in state and Tribal water quality standards, improving the scientific foundation for addressing point and non-point source water quality impairment, and determining appropriate and effective watershed management alternatives. Specifically, this research will provide: (1) the scientific foundation and information management scheme for the 303(d) listing process, including a classification framework for surface waters, watersheds, and regions to guide problem formulation; (2) first generation diagnostics methods to distinguish among major classes of individual aquatic stressors and/or suggest causal mechanisms that contribute to impairment of marine and freshwater systems; and (3) diagnostic methods and technical support documents for determining the relative significance of multiple stressors in 303(d) listed waters. Technical guidance and assistance will also be provided to states to promote the establishment of scientifically sound bioassessments and biologically-based water quality criteria for rivers and streams.

Modeling and landscape characterization research will improve the development of watershed management approaches and permits for point and non-point source discharges. Modeling research will develop, refine, and evaluate draft protocols for developing watershed management tools for nutrients and sediment loadings. Landscape characterization research will

develop methods to characterize watershed conditions based on landscape indicators, watershed classifications, and ecological and hydrological process-modeling. This research will determine if landscape-based classification of watersheds can be used effectively to detect changes in watershed condition in response to landscape stressors. Valuable applications of landscape indicators and assessments by states, Tribes and water resource managers include: prioritizing vulnerable areas (e.g., steep slopes, erodible soils) for more targeted monitoring to identify CWA "impaired" water bodies; identifying "pristine" sites for selecting reference conditions; identifying potential causes of impairment; forecasting the impacts of remediation decisions; identifying opportunities for protecting drinking water sources; and creating "smart-growth" development alternatives that minimize environmental impacts. Risk management research will focus on developing a better understanding of the sources of these stressors and the effectiveness of management options to control them. The current focus of this work is on the management of suspended solids and sediments and the management of stressors from Animal Feeding Operations and biosolids activities. This information will be used to develop decision support tools to assist watershed managers in analyzing the problem(s) and identifying cost-effective solutions.

Research to understand hypoxia, algal blooms, and eutrophication will also continue. An area of approximately 7,000 square miles in the Gulf of Mexico is hypoxic, and the incidence of algal blooms is increasing in coastal waters world wide. These stresses may be related to increased nutrient loadings and eutrophication. They threaten ecosystem integrity, sustained use, and productivity. EPA will develop stressor response models to understand and predict the relationship between stressors such as nutrients, eutrophication, and hypoxia on aquatic ecosystems including wetlands, riparian zones, sediments, and freshwater and marine ecosystems. EPA will also develop an ecological risk assessment for nutrients, initially focusing on nitrogen, as part of its program to develop common methodologies for integrating ecological and human health assessments. Research on the ecology and oceanography of Harmful Algal Blooms (HABs) will be developed as part of a joint effort with other Federal agencies including the National Oceanic and Atmospheric Administration (NOAA) and the National Science Foundation (NSF).

Although suspended solids and sediments are a natural part of aquatic ecosystems critical to the energy cycle of the water body and the provision of microhabitats, they have become stressors associated with human activity that adversely affect aquatic habitats. In a 1998 EPA *Water Quality Inventory, Report to Congress*, suspended solids and sediments were among the leading causes of water quality impairment for streams and rivers. To maintain natural background levels of suspended solids and sediments, water resource managers need scientific tools that are currently not available. In FY 2003, EPA's suspended solids and sediments research program will continue to develop tools to determine background sediment levels inherent to a region. The Agency's research program will also focus on understanding the stressor response relationships between sediment imbalances and impacts to aquatic communities. Risk management strategies will be developed to help reduce the impact of human activities on sedimentation and to maintain suspended solids and sediments at background levels.

Chemical stressors also impact aquatic life, the benthic community, wildlife, and human health. The research focus in this area is to develop scientifically defensible methods to better describe the risks of toxic chemicals to aquatic and aquatic-dependent populations and communities. Specific goals are to: (1) demonstrate methods for water quality criteria for bioaccumulative and non-bioaccumulative chemicals based on more complete and accurate risk characterization of toxic chemicals to aquatic organisms; (2) provide methods for water quality criteria based on population-level risk characterization of toxic chemicals to aquatic life and aquatic-dependent wildlife; (3) provide methods for extrapolating chemical toxicity data across exposure conditions and across endpoints, life stages, and species which can support assessment of risks to aquatic life and aquatic-dependent wildlife for chemicals with limited data; and (4) provide approaches for evaluating the relative and cumulative risks from toxic chemicals on populations of aquatic life and aquatic-dependent wildlife at site-specific to regional scales.

FY 2003 Change from FY 2002

EPM

(+$1,000,000/+10 FTE) This increase will provide internal support for the new Targeted Watersheds Project, (see STAG account, below). Additional staffing will be critical to ensuring the proper and efficient execution of this new grant program.

(+$1,750,000) This increase will support restoration projects, scientific programs and public education activities under the Chesapeake Bay Program.

(+$1,000,000) This increase will support restoration projects, scientific programs and public education activities relating to Lake Pontchartrain, as authorized in the Estuaries and Clean Waters Act of 2000.

(-$32,966,200) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

(+$1,039,000) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

S & T

(-$1,500,000) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

STAG

(-$12,100,000) This reduction to the CWA Section 106 grant account partially removes an unrequested FY 2002 increase and results in a $10,500,000 increase over the FY2002 President's request.

(+$20,000,000) This increase will provide funding to the Targeted Watersheds Project, a new program to provide grants to watershed stakeholders ready to implement watershed restoration efforts in a discrete set of priority watersheds. Targeted watersheds will be chosen based on criteria established in consultation with our state, local and other stakeholder partners, but will emphasize value of the resource, likelihood of positive environmental outcomes, evidence of strong state/local government support, ability to leverage agency resources and readiness to proceed based on existing problem identification.

(-$5,720,000) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Research

S&T

- (+$65,800, + 0.3 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.
- (-$2,193,800) The FY 2003 Request is $2,193,800 below the 2002 Enacted budget due to the Congressional earmarks received during the appropriations process which are not included in the 2003 President's Request.

Annual Performance Goals and Measures

Assessments of Designated Uses

In 2003	Assess, restore and protect watersheds
In 2002	Assess, restore and protect watersheds
In 2001	Assessed 132 1 river miles/lake acres, and 6 057 square estuary square miles that have water quality supporting designated uses where applicable, for drinking water supply
In 2001	Continued to restore and protect watersheds through implementation of over 2,300 TMDLs

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Assessed river miles/lake acres/estuary square miles that have water quality supporting designated beneficial uses where applicable, for drinking water supply	132K/6M	no target	no target	Mi/Acres
Assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses, where applicable, for fish and shellfish consumption	174K/5M/7K	no target	no target	Mi/Acres/Sq Mi
Assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses where applicable, for recreation	269K/10M/18K	no target	no target	Mi/Acres/Sq Mi
TMDLs established by EPA (cumulative)	870	930	1,245	TMDLs
TMDLs scheduled to be completed by the end of 2001 (cumulative)	3,826			TMDLs
Impaired assessed river miles, lake acres, & estuary square miles that a) are covered under WRAS and b) were restored to their designated uses during the reporting period				
Assessed river miles, lake acres and estuary square miles that have water quality supporting designated beneficial uses where applicable, for aquatic life support.	406K/9M/11K	no target	no target	Mi/Acres/Sq Mi
TMDLs submitted by the state (cumulative)	2,882			TMDLs
State-established TMDLs approved (cumulative)	2,872	6,000	9,200	TMDLs

Baseline — From the upcoming 2000 Report to Congress on the National Water Quality Inventory the miles/acres quantities reported in the FY 2001column translate into the following percentages of waters 66% of assessed river and stream miles, 73% of assessed lake, reservoir and pond acres, and 49% of assessed estuary square miles have water quality supporting designated beneficial uses for aquatic life support Likewise 69% of assessed river and stream miles, 63% of assessed lake reservoir and pond acres, and 53% of assessed estuary square miles have water quality supporting their designated use for fish consumption 86% of assessed river and stream miles and 83% of lake, reservoir and pond acres support their designated use for drinking water supply

Watershed Protection

In 2003 — By FY 2003, Water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards up from 500 watersheds in 1998

In 2002 — By FY 2003, Water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards up from 500 watersheds in 1998

In 2001 — Water quality improved on a watershed basis such that 510 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Watersheds that have greater than 80% of assessed waters meeting all water quality standards	510	600 (FY 03)	600	8-digit HUCs

Baseline — As of 1998 state reports, 500 watershed had met the criteria for water quality improving on a watershed basis For a watershed to be counted toward this goal, at least 25% of the segments in the watershed must be assessed within the past 4 years consistent with assessment guidelines developed pursuant to section 305(b) of the Clean Water Act

State/Tribal Water Quality Standards

In 2003 — 36 Percent of Tribes will have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems

In 2003 — 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 2002 30 Percent of Tribes will have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems

In 2002 Assure that States and Tribes have effective up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities

In 2001 21 States and 19 Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities

In 2001 22% of Tribes have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Tribes with monitoring and assessment programs (cumulative)	22	30	36	% Tribes
Pilot S1(QRET/305(b) reporting projects with Tribes	2			Pilot projects
States with new or revised water quality standards that EPA has reviewed and approved or disapproved and promulgated federal replacement standards	21	20	20	States
States and tribes with approved E coli or enterococci criteria		40	55	States
Tribes with water quality standards adopted and approved (cumulative)	19	27	30	Tribes

Baseline In 1999, less than 5% of tribes had water quality monitoring and assessment programs appropriate for their circumstances and were entering water quality data into EPA's national data systems State water quality standards program reviews are under a 3-year cycle as mandated by the Clean Water Act under which all states maintain updated water quality programs The performance measure of state submissions (above) thus represents a "rolling annual total" of updated standards acted upon by EPA, and so are neither cumulative nor strictly incremental EPA must review and approve or disapprove state revisions to water quality standards within 60-90 days after receiving the state's package As of this May EPA was overdue in approving or disapproving 38 new or revised standards from 21 states and tribes

Protecting and Enhancing Estuaries

In 2003 Restore and protect estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs)

In 2002 Restore and protect estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs)

In 2001 Restored and protected 70,000 acres of estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs)

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Priority actions or commitments initiated nationwide as part of the National Estuary Program since approval of the first CCMP in 1991 (cumulative)	83			Actions
Acres of habitat restored and protected nationwide as part of the National Estuary Program (annual)	70,000	50,000	25,000	Acres

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

Gulf of Mexico

In 2003 Assist the Gulf States in implementing watershed restoration actions in 14 priority impaired coastal river and estuary segments

In 2003 Support projects with the goal of creating, restoring, or protecting 2400 acres of important coastal and marine habitats per year (incremental)

In 2002 Assist the Gulf States in implementing watershed restoration action strategies (WRAS) or their equivalent in 37 priority coastal river and estuary segments

In 2002 Support projects with the goal of creating, restoring, or protecting over 2,400 acres of important coastal and marine habitats per year

In 2001 Assisted the Gulf States in implementing watershed restoration action strategies (WRAS) or their equivalent in 37 priority coastal river and estuary segments

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Impaired Gulf coastal river and estuary segments implementing watershed restoration actions (incremental)	37	37	14	Segments
TMDLs (1) scheduled to be completed; (2) submitted by Gulf States for segments in the coastal watershed, and (3) established by EPA and, (4) Gulf State established TMDLs approved	79 / 851 / 32			TMDLs
Assessed river miles, lake acres, and estuary square miles that a) are covered under WRAS and b) were restored to their designated uses during the reporting period				Miles etc
Increase acreage and restore or protect coastal and marine habitats by 2009 (incremental)		2,400	2,400	Acres

Baseline There are currently 95 coastal watersheds at the 8-digit hydrologic unit code (HUC) scale on the Gulf coast. The Gulf of Mexico Program has identified 12 priority coastal areas for assistance. These 12 areas include 30 of the 95 coastal watersheds. Within the 30 priority watersheds, the Gulf States have identified 354 segments that are impaired and not meeting full designated uses under the States' water quality standards. 71 or 20% is the target proposed to reinforce Gulf State efforts to implement 5-year basin rotation schedules. The target of 71 is divided by 5 to achieve the goal for assistance provided in at least 14 impaired segments each year for the next 5 years.

Wetland and River Corridor Projects

In 2003 Support wetlands and stream corridor restoration and management and assessment/monitoring of overall wetland health

In 2002 Support wetlands and stream corridor restoration and management and assessment/monitoring of overall wetland health

In 2001 Supported 108 wetlands and stream corridor restoration and management projects and continued our efforts assessment/monitoring of overall wetland health

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Watershed-based wetland restoration projects to which EPA has provided financial support (other than 5-Star Projects) and/or has contributed significant technical assistance (cumulative)	108			Projects
States/tribes developing formal programs and wetlands assessment capacities, aimed toward measuring wetland gain loss and/or deterioration	0	4		States/Tribes
Watershed-based wetlands restoration projects to which EPA has provided financial assistance (including 5-Star projects) and/or has contributed significant technical assistance. (cumulative)			550	Projects

Baseline Going into FY99, 11 states/tribes had met the criteria for establishing formal assessment/monitoring programs

Chesapeake Bay Habitat

In 2003 Improve habitat in the Chesapeake Bay

In 2002 Improve habitat in the Chesapeake Bay

In 2001 Improved habitat in the Chesapeake Bay by reducing 48.1 million pounds of nitrogen, 6.84 million pounds of phosphorous and restored over 69,000 acres of submerged aquatic vegetation

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Pounds reduction from 1985 levels of nitrogen and phosphorus loads entering Chesapeake Bay (cumulative)	48 1 / 6 84 M	77/8 4 million		Pounds
Miles of streambank and shoreline restored with riparian forest buffers (cumulative)	711		896	Miles
Wastewater flow to the Chesapeake Bay treated by biological nutrient removal (cumulative)	47	53	58	% WW flow
Percent shallow waters that meet water clarity requirements for submerged aquatic vegetation			15	% waters
Acres of submerged aquatic vegetation (SAV) present in the Chesapeake Bay (cumulative)	69.126	78 000	80,000	Acres
Stream miles of migratory fish habitat reopened through provision of fish passages (cumulative)	816	1 243	1 243	Miles

Baseline In 1985 0% of wastewater flow had been treated by Biological Nutrient Removal. In 1989, 49 miles of migratory fish habitat was reopened In 1984 there were 37 000 acres of submerged aquatic vegetation in the Chesapeake Bay In 1988, voluntary IPM practices had been established on 2% of the lands in the Chesapeake Bay watershed

Tribal Environmental Water Presence

In 2003 70 Percent of Tribes will have a "water program environmental presence" (i e , one or more persons, as appropriate, with environmental capability to advise Tribal governments on developing and implementing programs)

In 2002 60 Percent of Tribes will have a "water program environmental presence" (i e , one or more persons as appropriate with environmental capability to advise Tribal governments on developing and implementing programs)

In 2001 47% of Tribes have a "water program environmental presence" (i.e , one or more persons as appropriate with environmental capability to advise Tribal governments on developing and implementing programs)

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Tribes with a water program presence (cumulative)	47	60	70	% Tribes

Baseline: As of 1999, approximately 20% of Tribes have a "water program environmental presence "

Research

Scientific Rationale for Surface Water Criteria

In 2003 Provide the science and data management scheme for the 303(d) listing process to include classification systems for surface waters, watersheds, and regions so that states will have an improved and reliable means of identifying impaired water bodies

In 2003 Provide updated models for stormwater management and for allocating suspended solids and sediment loads and related uncertainties for mixed land use watersheds so that state and local resource managers can make improved scientifically-based decisions that protect aquatic resources and human health

In 2002 Provide a method for setting risk-based aquatic life criteria for toxic chemicals which minimizes uncertainties of translating national and site-specific water quality criteria.

In 2001 Developed (and published jointly as part of Office of Water guidance) the framework for diagnosing adverse chemical pollutants in surface waters

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Complete Clinch and Powell Watershed Risk Assessment	0			assessment
Complete and publish a compendium of case studies illustrating the application of the Stressor Identification Guidelines	1			compendium

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Decision-support tools and guidance for watershed scale assessments, report on risk characterization for watersheds	30-Sep-2001			
Report on Sediment Toxicity	0			report
Final report (including model and database) comparing and analyzing the quantitative dose-response relationships of aquatic and aquatic-associated wildlife and dioxin-like PBTs		1		report
Classification frameworks for geographic regions and at the watershed, water body, and habitat scale			1	report
Prepare a document for use by states to assist in modeling risk management options and restoration measures in waterbodies impaired due to suspended solids and sediment			1	document
Complete report on selected methods for integrating ecological risk assessment and economics to support watershed decision-marking			1	report

Baseline

The State and EPA implementation of processes to identify impaired waters and restore them via a wide array of programs including the TMDL process, requires assessment of waters and listing them as impaired. Recent Congressionally directed National Academy of Sciences studies note that the Agency's approach to listing impaired waters (the 3030(d) process) is not complete (i.e., a substantial quantity of the Nation's waters remain un-assessed) and is not scientifically robust (it appears that some listed waters may be inappropriately identified or mis-characterized). Accordingly, ORD has embarked on a focused research program to develop the monitoring, diagnostic, and classification schemes to improve the Agency and State approaches to this listing process. While this is a national requirement, regional and watershed as well as biological differences must be factored into the process.

The States and other reporting and assessment entities have listed sediments as a major cause of water body and watershed impairment. Urban storm water has also been identified as a major source of impairment. In addition the National Academy of Science report on TMDLs has called for the increasing characterization and use of uncertainty in modeling for TMDLs. In the case of storm water management, TMDL guidance may require permits for storm water and hence the urgent need to both improve the science of modeling such systems and the additional need to include uncertainty analysis techniques as part of the modeling process. Accordingly, ORD's research has been directed to provide updates in the modeling capability for this important national problem and to increase the capability of modelers and TMDL analysts to provide more robust and cost-effective outcomes for water bodies impaired by sediments.

Verification and Validation of Performance Measures

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

Performance Database: A simple database/tracking system is being developed to document the number of acres of habitat restored and protected. Key fields will include the type of action (e.g. protection or restoration) and habitat type (e.g. estuarine, riparian).

Data Source: NEP Program documents such as annual work plans (which contain achievements made in the previous year) and annual progress reports are used along with other implementation tracking materials to document the number of acres of habitat restored and protected. EPA then aggregates the data provided by each NEP to arrive at a national total for the entire Program.

QA/QC Procedures: Primary data is prepared by the staff of the NEP based on their own reports and from data supplied by other partnering agencies/organizations (that are responsible for implementing the action resulting in habitat protection and restoration). Aggregate data is compiled through a contractor review of the NEP documentation. The NEP staff are requested to follow guidance provided by EPA to prepare their reports, and to verify the numbers they

provided. EPA and a contractor then confirm that the national total accurately reflects the information submitted by each program.

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

Data Limitations: It is still early to determine the full extent of data limitations. Current data limitations include: information that may be reported inconsistently (based on different interpretations of the protection and restoration definitions), acreage that may be miscalculated or misreported, and acreage that may be double counted (same parcel may also be counted by partnering/implementing agency or need to be replanted multiple years). In addition, measuring the number of acres of habitat may not directly correlate to improvements in the health of the habitat reported, but is rather a measure of on-the-ground progress made by the NEPs.

New/Improved Data or Systems: The Office of Wetlands, Oceans and Watersheds has developed a standardized format for data reporting and compilation. In addition to providing the reporting matrix, habitat protection and restoration activities were defined, and habitat categories specified to assist in providing consistency of reporting. We have also designed a web page that highlights habitat loss/alteration in an educational fashion with graphics and images which reflect specific NEP reports (does not illustrate aggregate data at the national level). This will enable EPA to provide a visual means of communicating NEP performance and habitat protection and restoration progress to a wide range of stakeholders and decision-makers. In the future, we will examine the possibility of geo-referencing the data in a geographic information system (GIS).

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

Performance Database: The Watershed Assessment Tracking Environmental Results System (WATERS) is used to summarize water quality information at the watershed level. For purposes of this national summary, "watersheds" are equivalent to 8-digit hydrologic unit codes (HUCs), of which there are 2,262 nationwide. State CWA 305(b) data is submitted every two years and many states provide annual updates. Data to be used for the FY 2003 Annual Performance Report will include state submissions expected in the spring of 2002.

Data Source: State CWA 305(b) reporting. The data used by the states to assess water quality and prepare its 305(b) report include ambient monitoring results from multiple sources (state, USGS, volunteer, academic) as well as predictive tools like water quality models. Because states compile diverse data to support water quality assessments, EPA uses this data to present a snapshot of water quality as reported by the states, but does not use it to report trends in water quality. EPA's Office of Water and Office of Research and Development has established a monitoring and design team that is working with states on a 3 to 5-year project to recommend a design for a national probability-based monitoring network that could be used to provide both status and trends in water quality at a state and national level.

QA/QC Procedures: QA/QC of data provided by states pursuant to individual state assessments (under 305(b)) is dependent on individual state procedures. Numerous system level checks are built into WATERS based upon the business rules associated with assessment information. States are then given the opportunity to review the information in WATERS to ensure it accurately reflects the data that they submitted. Detailed data exchange guidance and training are also provided to the states. Sufficiency threshold for inclusion in this measure requires that 20% of stream miles in an 8-digit HUC be assessed.

Data Quality Review: Numerous independent reports have cited that weaknesses in monitoring programs and the reporting of monitoring data undermine EPA's ability to depict the condition of the nation's waters and to support scientifically-sound water program decisions. The most recent reports include the 1998 *Report of the Federal Advisory Committee on the Total Maximum Daily Load (TMDL) Program*, the March 15, 2000 General Accounting Office report *Water Quality: Key Decisions Limited by Inconsistent and Incomplete Data*, and the 2001 National Academy of Sciences Report *Assessing the TMDL Approach to Water Quality Management*.

In response to these evaluations, EPA has been working with states and other stakeholders to improve 1) data coverage, so that state reports reflect the condition of all waters of the state; 2) data consistency to facilitate comparison and aggregation of state data to the national level; and 3) documentation so that data limitations and discrepancies are fully understood by data users. First, EPA enhanced two existing data management tools (STORET and the Assessment Database) that include documentation of data quality information. Second, EPA has developed a GIS tool called WATERS that integrates many databases including STORET, the Assessment database, and a new water quality standards database. These integrated databases facilitate comparison and understanding of differences among state standards, monitoring activities, and assessment results. Third, EPA and states have developed a guidance document *Consolidated Assessment and Listing Methodology - a Compendium of Best Practices* intended to facilitate increased consistency in monitoring program design and the data and decision criteria used to support water quality assessments.

Data Limitations: Data are not representative of comprehensive national assessments since states do not yet employ a monitoring design that characterizes all waters in each reporting cycle. States do not use a consistent suite of water quality indicators to assess attainment with water quality standards. For example, indicators of aquatic life use support range from biological community assessments to levels of dissolved oxygen to concentrations of toxic pollutants. State assessments of water quality may include uncertainties associated with derived or modeled data. Differences in monitoring designs among and within states prevent the agency from aggregating water quality assessments at the national level with known statistical confidence.

New/Improved Data or Systems: The Office of Water is currently working with states, Tribes and other Federal agencies to improve the database that supports this management measure by addressing the underlying methods of monitoring water quality and assessing the data. Also, the Office of Water is working with partners to enhance monitoring networks to achieve comprehensive coverage of all waters, use a consistent suite of core water quality indicators (supplemented with additional indicators for specific water quality questions), and document key

data elements and decision criteria through electronic data systems and assessment methodologies. The Office of Water is using a variety of mechanisms to implement these improvements including data management systems, guidance, stakeholder meetings, training and technical assistance, program reviews and negotiations.

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

Performance Database: No formal database exists to track EPA approval/disapproval actions on new and revised state water quality standards, although such a database is currently being designed..

There is, however, an Assessment Database which tracks the water quality standard attainment status of the nation's surface waters. The new WATERS database is a GIS tool which maps this information. Please see discussion under "Watersheds that have greater than 80% of assessed waters meeting all water quality standards" for discussion of the WQS information mapped in WATERS.

Data Source: Regional reporting

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

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

Data Limitations: N/A

New/Improved Data or Systems: N/A

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

Performance Database: No formal database exists.

Data Source: Regional reporting

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

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

Coordination with Other Agencies

Protecting and restoring watersheds will depend largely on the direct involvement of many Federal agencies and state, Tribal and local governments who manage the multitude of programs necessary to address water quality on a watershed basis. Federal agency involvement will include USDA (Natural Resources Conservation Service, Forest Service, Agriculture Research Service), Department of the Interior (Bureau of Land Management, Office of Surface Mining, United States Geological Survey (USGS), Fish and Wildlife, and the Bureau of Indian Affairs), National Oceanographic and Atmospheric Administration (NOAA), Department of Transportation, and the Army Corps of Engineers. At the state level, agencies involved in watershed management typically include departments of natural resources or the environment, public health agencies, and forestry and recreation agencies. Locally, numerous agencies are involved, including Regional planning entities such as councils of governments, as well as local departments of environment, health and recreation who frequently have strong interests in watershed projects.

Government-wide, Federal agencies share the goal of achieving a net increase of 100,000 acres of wetlands per year by 2005, increasing wetlands functions and values, and implementing a fair and flexible approach to wetlands regulations.

Effectively implementing successful comprehensive management plans for the estuaries in the NEP depends on the cooperation, involvement, and commitment of Federal and state agency partners that have some role in protecting and/or managing those estuaries. Other agencies routinely involved include the Corps of Engineers, NOAA, the Fish and Wildlife Service, state departments of environmental protection or natural resources, and governors' offices.

Research

EPA has developed joint research initiatives with the National Oceanic Atmospheric Administration (NOAA) and the United States Geological Survey (USGS) for linking monitoring data and field studies information with available toxicity data and assessment models for developing sediment criteria.

In addition, under the Endangered Species Act, EPA is required to consult with the U.S Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) on actions that may affect endangered species. EPA has developed a draft strategy for research and development of criteria for endangered species that is now being reviewed. As part of implementation, EPA is coordinating its research with the Biological Research Division of the USGS.

The issue of eutrophication, hypoxia, and harmful algal blooms (HABs) is a priority with the Committee on Environment and Natural Resources (CENR). An interagency research strategy for pfiesteria and other harmful algal species was developed in 1998, and EPA is continuing to implement that strategy. EPA is working closely with NOAA on the issue of

nutrients and risks posed by HABs. This CENR sub-committee is also coordinating the research efforts among Federal agencies to assess the impacts of nutrients and hypoxia in the Gulf of Mexico.

Finally, EPA is initiating collaboration with the USDA, CDC and other Agencies to develop a better understanding of the sources of pathogenic stressors and potential strategies for their control.

Statutory Authorities

Clean Water Act (CWA)
Safe Drinking Water Act (SDWA)
Marine Protection, Research and Sanctuaries Act (MPRSA)
Ocean Dumping Ban Act of 1988
Shore Protection Act of 1988
Clean Vessel Act
Water Resource Development Act (WRDA)
Marine Plastic Pollution, Research and Control Act (MPPRCA) of 1987
National Invasive Species Act of 1996
Coastal Wetlands Planning, Protection, and Restoration Act of 1990
North American Wetlands Conservation Act
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Resource Conservation and Recovery Act (RCRA)
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Clean Air Act Amendments (CAA)
Pollution Prevention Act (PPA)
Estuaries and Clean Waters Act of 2000

Research

Clean Water Act (CWA)
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Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Endangered Species Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Clean and Safe Water

Objective: Reduce Loadings and Air Deposition

By 2005, reduce pollutant loadings from key point and nonpoint sources by at least 11 percent from 1992 levels. Air deposition of key pollutants will be reduced to 1990 levels.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena
Reduce Loadings and Air Deposition	**$2,007,520.1**	**$2,008,432.1**	**$1,630,434.4**	**($377,997.7)**
Environmental Program & Management	$143,264.6	$152,956.6	$134 461.0	($18,495 6)
Science & Technology	$10.719.4	$7.585 8	$5.496 6	($2.089 2)
State and Tribal Assistance Grants	$1.853.536.1	$1.847.889 7	$1.490.476 8	($357.412.9)
Total Workyears	833.2	869.5	866.6	-2 9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Administrative Services	$1.509 8	$0 0	$0 0	$0 0
Congressionally Mandated Projects	$256,867 2	$241.582 9	$0 0	($241.582.9)
Disadvantaged Communities	$4.309 6	$4.350 8	$4.481 3	$130 5
EMPACT	$100.1	$0 0	$0 0	$0 0
Effluent Guidelines	$23.354.1	$22.773 4	$23.010 3	$236 9
Facilities Infrastructure and Operations	$11,354 5	$11:335 7	$11.869 4	$533.7
Homeland Security	$0.0	$1.500.0	$0.0	($1.500.0)
Lake Champlain	$0.0	$1.545.2	$0 0	($1,545.2)
Legal Services	$2 714 3	$2.923 1	$3.170 7	$247 6
Management Services and Stewardship	$3,654 4	$5.710 6	$6 192 8	$482 2
NPDES Program	$40.961 5	$40.991 0	$41 720.8	$729 8
National Nonpoint Source Program Implementation	$16.644 6	$16.488 6	$16.908 6	$420.0
Recreational Water and Wet Weather Flows Research	$5.926 4	$5.635 8	$5.496 6	($139 2)
Regional Management	$402.7	$494.2	$490.7	($3 5)
State Nonpoint Source Grants	$237.476.8	$237.476.8	$238.476.8	$1.000 0
Wastewater Management/Tech Innovations	$9.055 0	$8.840.1	$9.073.7	$233 6

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Water Infrastructure, Alaska Native Villages	$34,923.0	$40,000.0	$40,000.0	$0.0
Water Infrastructure Bristol County	$1,935.7	$0.0	$0.0	$0.0
Water Infrastructure,Clean Water State Revolving Fund (CW-SRF)	$1,347,030.0	$1,350,000.0	$1,212,000.0	($138,000.0)
Water Quality Infrastructure Protection	$16,704.3	$16,783.7	$17,239.3	$455.6

FY 2003 Request

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. Under the National Pollutant Discharge Elimination System (NPDES) program (which includes NPDES permits covering municipal and industrial discharges, urban wet weather, large animal feeding operations, mining, the pretreatment program for non-domestic wastewater discharges into municipal sanitary sewers, and biosolids management controls), specific limits are set for pollutants discharged from point sources into waters of the United States. These limits are designed to ensure that national technology based standards (effluent limitations and guidelines), which require achievable pollutant reductions generally, and water quality based requirements, which require greater controls in locations where water quality standards would not otherwise be met, are achieved. The point source reductions required by the TMDLs must be implemented through issuance of NPDES permits containing appropriate limits. Financial assistance to states, interstate organizations, and Tribes for many of these programs is provided through the Section 106 grant program included under Objective 2 of the Clean and Safe Water Goal: Protect Watersheds and Aquatic Communities. EPA also provides financial assistance through the Clean Water State Revolving Fund (CWSRF) program for the construction of wastewater treatment facilities, implementation of projects to manage and reduce nonpoint source pollution, and execution of other water quality management projects. The program is encouraging the use of CWSRF loans to finance the highest priority projects on a watershed or statewide basis and continued flexibility for states to direct loan funds to their greatest infrastructure needs, whether wastewater or drinking water. Additionally, the program provides grants for Alaska Native Villages, Indian Tribes, and other communities with special needs.

Safeguarding our nation's 20,000 wastewater collection and treatment systems from terrorist acts is the combined responsibility of private, local, state, and federal entities. Threats from terrorists could include contamination with chemical or biological agents, destruction of physical infrastructure and disruption of electrical and computer systems. Few utilities around the nation have undertaken comprehensive vulnerability assessments or emergency planning specifically for counter terrorism purposes. In response to these threats, EPA is focusing its efforts on development and testing of counter terrorism tools, supporting training and the development of vulnerability assessments and enhancing emergency operations plans by utilities, providing needed technical assistance, conducting research on redesign and detection for the collection and treatment systems, and testing and implementation of this research.

FY 2003 resources under objective 1 will support the efforts of EPA and its partners to provide tools and training necessary to assess vulnerabilities of critical wastewater treatment infrastructure, take appropriate preventive actions, and enhance emergency operation plans. In addition we intend to support on-going vulnerability prevention through on-site technical assistance.

These base programs have been largely responsible for the substantial progress made to date in reducing water pollution. Providing states with continuing support is essential to achieving this objective and the overall goal of clean and safe water. EPA, in partnership with the states, will continue to ensure that all facilities required to have permits will have permits that are effective and include all conditions needed to ensure water quality protection through reductions in pollutant loadings. The Agency will continue its efforts to promote innovation in the NPDES and pretreatment programs. In addition, the Agency will continue to reorient both the NPDES and CWSRF programs to a watershed focus, and will continue to work with states to provide assistance when needed to the nation's 13,000 small publicly-owned wastewater treatment plants to help them comply with their permits.

The Agency will take final action on effluent limitations guidelines for two major industrial sectors: metal products and machinery and concentrated animal feeding operations (CAFOs). These guidelines will then be incorporated into NPDES permits as they are issued or reissued by the NPDES permitting authority. EPA will continue to develop the chemical criteria protective of aquatic life and human health which complement the effluent guidelines used in the NPDES program.

EPA is developing regulations under section 316(b) of the Clean Water Act to ensure that the location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. These regulations are unique in that they apply to the intake of water and not the discharge. A major goal of this program is to minimize the impingement and entrainment of fish and other aquatic organisms as they are drawn into a facility's cooling water intake. Impingement occurs when fish and other aquatic life are trapped against cooling water intake screens. Entrainment occurs when aquatic organisms, eggs and larvae are drawn into a cooling system, through the heat exchanger, and then pumped back out. In FY 2003, EPA will take important regulatory steps to provide this aquatic protection. First, EPA will take final action to regulate cooling water intakes at existing power plants – both utilities and non-utility power producers – that use large volumes of cooling water (often referred to as Phase 2 regulations). Second, EPA will propose regulations for a larger group of facilities that employ a cooling water intake structure with intake flow levels less than those covered by Phase 2, but where flow levels remain a concern for aquatic organisms (referred to as Phase 3 regulations). In addition to electricity generating facilities, Phase 3 regulations could control chemical manufacturing facilities, pulp and paper manufacturing facilities, and petroleum product manufacturing facilities.

During 2003, the Agency will continue implementing the regulations to control storm water from municipalities, industries and construction sources; to have approximately 900 CSO communities covered by NPDES permits and implementing controls based on EPA's CSO

policy as required by the Consolidated Appropriations Act of 2000; and to clarify capacity, management, operation and maintenance, and reporting requirements on unauthorized SSOs discharging into U.S. waters. The Agency will also support loadings reductions by helping states and municipalities integrate their water quality standards and CSO controls.

EPA will continue efforts to deliver decision support tools and alternative, less costly wet weather flow control technologies for use by local decision makers involved in community-based watershed management. Wet weather flow discharges can pose significant risk to both human health and downstream ecosystems. Effective watershed management strategies and guidance for wet weather flow dischargers are key priority areas remaining to assure clean water and safe drinking water. To that end, the Agency will again this year focus on wet weather-related applications for grants authorized under the Clean Water Act section 104(b)(3) for research, investigations, training, demonstrations and studies aimed at reducing water pollution.

The Agency is implementing a multi-year strategy to address how it will minimize environmental and public health impacts from animal feeding operations (AFOs) over the next decade and beyond. EPA is working with states to develop and issue permits for all concentrated animal feeding operations (CAFOs) greater than 1,000 animal units and is working to update 25 year old regulations covering CAFO permitting. These permits are issued by EPA and the states. In addition, EPA will work with states and the U.S. Department of Agriculture to assist all AFO facilities in developing comprehensive nutrient management plans.

The Office of Inspector General has identified the NPDES permit backlog as a material weakness under Federal Manager's Financial Integrity Act (FMFIA). The backlog in EPA-issued permits had tripled over the past 10 years; and the backlog in state-issued permits doubled over this time. To address this issue, a multi-year backlog reduction plan has been developed and is being implemented. The plan calls for better defining the backlog, developing innovative approaches, and providing technical support and training to Regions and states. In 2003, EPA will maintain a target for the backlog of current permits for major point sources at 10 percent, compared to a 28% backlog in May 1999.

EPA provides financial assistance through the CWSRF program for the construction of wastewater treatment facilities and implementation of nonpoint source and estuarine management plans. For 2003, the Agency is requesting $1.212 billion for the Clean Water State Revolving Fund. Federal capitalization of the 51 state funds is critical to support point and nonpoint source programs to reduce pollutant discharge levels. The effective and efficient operation of state programs is critical to the success of the national SRF programs.

The CWSRF investment will continue the Agency's commitment to capitalize the CWSRF in order for state SRFs to provide an average of $2 billion in annual financial assistance even after Federal capitalization grants end. More than $19 billion has already been provided to capitalize the CWSRF, over twice the original Clean Water Act authorized level of $8.4 billion. Total CWSRF funding available for loans since 1987, reflecting loan repayments, state match dollars, and other funding sources, is approximately $37.7 billion, of which more than $34

billion has been provided to communities as financial assistance. As of July 2001. $3.4 billion is being readied for loans.

The Agency is requesting a one year extension of authority provided in the 1996 Safe Drinking Water Act (SDWA) Amendments which allows states to transfer an amount equal up to 33 percent of their Drinking Water State Revolving Fund (DWSRF) grants to their CWSRF programs, or an equivalent amount from their CWSRF program to their DWSRF program. The transfer provision gives states flexibility to address the most critical demands in either program at a given time. Unless extended by the Congress, the transfer provision expires September 30, 2002.

The CWSRF and the DWSRF are important elements of the nation's substantial investment in sewage treatment and drinking water systems which provides Americans with significant benefits in the form of reduced water pollution and safe drinking water. The SRFs continue to play a key role as communities address their aging infrastructure, increases in population and new treatment needs. In addition, increases in population and new treatment demands are straining financial resources. In a June 2000 study, EPA estimated that without improved wastewater treatment, population growth by the year 2016 will produce effluent loading similar to those of the mid-1970s. The Agency is committed to fostering a constructive dialogue on the best approaches to assuring that critical water infrastructure is maintained and improved so that Americans can enjoy clean and safe water for many years to come. In addition, the Agency is continuing to broaden its Clean Watersheds Needs Survey to include more location specific and nonpoint source pollution controls information, and to support the states in making CSO and SSO project funding decisions.

The Agency also provides technical assistance to support community needs. These efforts include dissemination of information on wastewater technologies, enhancement of community awareness of financing programs and assistance with program development activities, and, with the Office of Research and Development (ORD) support, the establishment of an Environmental Technology Verification Center to address control technologies for nonpoint source urban wet weather flows, and wastewater treatment systems for small communities. The agency also provides community technical assistance through our sponsorship and work with the Rural Community Assistance Program and the National Small Flows Clearinghouse. The water efficiency program provides information on the beneficial impacts of municipal water efficiency, and helps communities and our partners (including the lodging industry, office building managers, and educational institutions) become aware of, and reduce, their rates of water use, thereby saving water, conserving energy, and reducing chemical usage.

More than 70,000 homes in Indian country have inadequate or nonexistent wastewater treatment. EPA and the Indian Health Service estimate tribal wastewater infrastructure needs exceed $650 million. To improve public health and water quality in Indian Country, the Agency proposes to continue the 1 ½ percent set-aside of the CWSRF for wastewater grants to Tribes as provided in the Agency's FY 2002 appropriations bill. The Agency also requests $40 million for wastewater and water infrastructure projects in Alaska Native Villages.

The Agency continues to manage the construction grants close-out process and expects by the end of 2002 to have substantially achieved success in closing out pre-1992 projects; we expect that we will still have several pending appeals in a few states. The Agency also provides grant assistance for environmental protection for Alaska Rural and Native Villages and Indian Tribes, and manages grant assistance for 739 water and wastewater projects with total appropriations of over $3.5 billion through FY 2001.

EPA does not regulate septic, or "on-site decentralized wastewater," systems. However, poorly-sited and maintained systems pose a risk to drinking water wells and surface water, drinking water supplies, home basements, yards, shellfish beds, aquatic life and the supporting ecosystem. Properly managed septic systems are an important part of the nation's wastewater treatment infrastructure, and the water program is addressing the challenges of effective system management through publication of voluntary management standards that states may adopt and municipalities may implement.

According to states, pollution from nonpoint sources remains the single largest cause of water pollution, with agriculture identified as a leading cause of impairment in 60 percent of the river miles surveyed. In order to meet this objective and restore and maintain water quality, significant loading reductions from nonpoint sources (NPS) must be achieved. Because EPA does not have direct authority to regulate NPS under the Clean Water Act, effective state NPS programs are critical to our overall success. EPA will continue to provide Section 319 non-point source grants to states for on-the-ground projects and to encourage states to provide CWSRF funding for high priority projects that address nonpoint source and estuary issues.

To reduce nonpoint source related water quality impacts, EPA has been working with the states to strengthen their nonpoint source management programs. All states have now completed upgrading their management programs and are in the process of implementing these programs. To facilitate this effort, EPA and the Association of state and Interstate Water Pollution Control Agencies (ASIWPCA) will continue the state/EPA nonpoint source management partnership to help states identify and meet their technical and programmatic needs. In particular, EPA and the states will work together to better use the CWA Section 319 framework and funds to develop and implement NPS TMDLs.

Under the Coastal Zone Act Reauthorization Amendments (CZARA) 6217(g) program, Coastal states are engaged in a similar process of completing and implementing their coastal nonpoint source management programs. These programs were conditionally approved by EPA and NOAA in 1998 and to date eight of 29 states have completed this process. EPA and NOAA are working in partnership with the coastal states to fully approve these programs before the conditional approvals expire. EPA and NOAA support the integration of states' nonpoint source management programs and their coastal nonpoint source management programs.

EPA's nonpoint source program provides program, technical, and financial assistance to help states and Tribes implement programs to control various forms of runoff. While agricultural sources are the most significant category of nonpoint source runoff, state NPS programs address all categories of NPS runoff with a mix of voluntary and state regulatory

approaches. These state programs are the primary means for achieving nonpoint source load reductions called for in TMDLs. EPA will work with states to facilitate using Clean Water Act Section 319 funds and the CWSRF to implement state TMDLs. EPA's nonpoint source program works closely with a number of other Federal agencies to help reduce runoff and encourage private sector partnerships to spur voluntary adoption of NPS controls. In 2003 and on a continuing basis, new tools, best management practices, and NPS and contaminated sediment control strategies will need to be developed in cooperation with states, Tribes, other Federal agencies and the private sector.

Tribal participation in the Nonpoint Source Control Program under CWA section 319(h) has steadily increased. The number of Tribes receiving 319(h) grants has risen from two in 1991 to over seventy in 2001. This number is expected to increase annually as more federally recognized Tribes with significant NPS pollution problems become eligible to participate in the 319(h) program. EPA conducts several tribal workshops every year with the primary objectives of improving Tribes' knowledge of NPS pollution, assessment techniques, program development, and implementation. Due to increasing demand for limited tribal grant funds, EPA is proposing a one year elimination of the current statutory ceiling on the percentage of Section 319 grant funds that may be awarded to Tribes/tribal consortia for nonpoint source activities.

The Agency will continue efforts to assess the risks associated with and reduce atmospheric deposition of pollutants, particularly nitrogen and mercury, using both Clean Water Act and Clean Air Act authorities. To address air deposition, the Agency has established a cross-media team to plan and implement strategies. As a result, water quality protection is considered in regulatory development under the Clean Air Act, in air research, and in the focus of partnerships with local communities. Air deposition is being addressed Agency-wide as an ecosystem problem with health, environmental, and economic impacts. EPA will continue to encourage greater air deposition monitoring, as well as continue to support state TMDLs and other tools that address impacts to water quality.

Research

Effective watershed management strategies and guidance for wet weather flow (WWF) discharges and improved recreational water quality and risk communication programs are necessary to ensure clean and safe water for drinking, recreation, and wildlife habitat. Pollution from urban and rural non-point sources during and after rainfalls is now one of the largest causes of water pollution. 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. Storm-generated, high flow rates can exacerbate ecological upsets and can cause significant physical damage to streams. In addition, thousands of beach advisories and closings are issued at recreational rivers, lakes, and oceans every year throughout the United States. According to the Natural Resources Defense Council's eleventh annual beach report, 11,270 closings and advisories were issued in 2000. As monitoring improves and expands, as required by the *Beaches Environmental Assessment and Coastal Health Act of 2000* (the Beaches Act), the numbers are likely to rise still higher. Under this research objective, EPA will continue to

develop and validate effective strategies for controlling WWFs, especially when they are toxic. EPA will also develop and provide effective evaluation tools necessary to make timely and informed decisions on beach advisories and closures and strengthen beach programs and water quality criteria for recreational water use.

Research on WWFs will focus on the development of decision support tools to evaluate and verify improved watershed management strategies. A truly holistic watershed management approach will include practical interaction with flood and erosion control, reuse and reclamation techniques, and infrastructure demands---while protecting the watershed environment, including source waters. A major public health emphasis will be placed on WWF management needs. To minimize the public health risks from swimming and other recreational water activities, research will specifically focus on both developing techniques to reduce WWF impacts as well as provide data to support the development of scientifically sound beach closure criteria. This program is designed to promote "community-based" decisions by developing decision support tools and alternative WWF control technologies and strategies for use by local decision makers involved in community-based watershed management and pollution control. In FY 2003, EPA plans to update its WWF Research Plan to address specific issues associated with aquatic stressors, including nutrients, suspended solids and sediments, pathogens, toxics, and flow.

Beaches research in FY 2003 will focus on better understanding the effects of microbial pathogens on human health. These pathogens present growing human health and environmental concerns. Significant uncertainty exists in determining the level of illness corresponding to the actual exposure (ingestion, inhalation, and skin contact) to contaminated recreational waters. A scientifically-based investigative process to determine potential health risks and eliminate their sources in recreational waters is sorely needed to provide decision makers with the necessary tools to make defensible science-based decisions to ensure public health safety. This will include identifying appropriate indicators of fecal contamination and determining relationships between indicators and risk levels for disease. As part of this effort, EPA is performing a suite of epidemiological studies needed to establish a stronger, more defensible link between water quality indicators and disease. These epidemiological studies will provide reliable information about the relationship between recreational water quality and swimming-associated health effects. This will enable EPA to provide states with consistent monitoring methods, standardized indicators of contamination, and standardized definitions of what constitutes a risk to public health. This information will be used to develop improved water quality criteria. Local public health officials can use the results of this research to provide the public with "real-time" information on potential exposure to pathogenic microbes and make more timely beach closure decisions.

Other research will focus on continued development of monitoring and risk communication alternatives, development and evaluation of faster and improved methods for measuring fecal indicators, and characterization of typical water ingestion exposures for swimmers. Improved indicators and exposure pattern data are needed to conduct well-designed epidemiological studies.

FY 2003 Change from FY 2002

EPM

- (-$1,000,000) This decrease reflects having successes in developing tools for vulnerability assessments to ensure security for wastewater.

- (-$500,000) This reduction reflects progress made in providing information to the wastewater treatment industry as well as facilitating communication and coordination between the wastewater treatment industry and relevant governmental agencies through a grant with the Association of Metropolitan Sewerage Agencies.

- (-$20,765,200) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

- (+$876,900) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

STAG

- (+$1,000,000) This increase in Section 319 Non-point source funding will support states' programs to address polluted runoff, including through implementation of watershed-based plans for NPS TMDLs.

- (-$138,000,000) The FY 2003 request ($1,212,000,000 for the CWSRF) is consistent with the longstanding goal for the CWSRF to revolve at an average of $2 billion per year. This reduction also helps fund high priority Homeland Security activities across the Federal government.

- (-$220,412,900) The FY 2003 Request is below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Research

S&T

- (-$1,950,000) The FY 2003 Request is $1,950,000 below the 2002 Enacted budget due to the Congressional earmarks received during the appropriations process which are not included in the 2003 President's Request.

- (-$291,800, -3.2 FTE) This reduction results from the completion of research on the development of rapid indicators of fecal contamination. Resources are being shifted to address drinking water pathogen issues in Goal 2, Objective 1.

Annual Performance Goals and Measures

Reducing Industrial Pollutant Discharge

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

In 2001 Millions of pounds of industrial discharges of pollutants to the nation's waters were significantly eliminated through implementation of effluent guidelines

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Reduction in loadings for toxic pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000 as compared to 1992 levels as predicted by model projections (cumulative)	10.3	10.5 million		Pounds
Reduction in loadings for conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as compared to 1992 levels as predicted by model projections (cum)	557.0	572 million		Pounds
Reduction in loadings for non-conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000 as compared to 1992 levels as predicted by model projections (cum)	922.0	1.007 million		Pounds

Baseline Loading reduction estimates are based on model projections from effluent guidelines promulgated between 1992 and 1999, with both the numbers of affected facilities and permits estimated. Flow data is not available for some point sources in PCS.

NPDES Permit Requirements

In 2003 Current NPDES permits reduce or eliminate loadings into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities (direct and indirect dischargers), and (2) pollutants from urban storm water, CSOs and CAFOs

In 2002 Current NPDES permits reduce or eliminate discharges into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities, and (2) pollutants from urban storm water, CSOs, and CAFOs

In 2001 Maintaining current NPDES permits and in the reduction or elimination of discharges into the nation's waters of inadequately treated discharges from municipal and industrial facilities, and pollutants from urban storm water CSOs and CAFOs

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Major point sources are covered by current permits.	75	90%	90%	Point Sources

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
States with current storm water permits for construction sites over 5 acres	91			% States
States with general NPDES permits for CAFOs > 1,000 animal units or with individual NPDES permits for all CAFOs > 1,000 animal units consistent with the AFO Strategy and guidance	59			% States
Permittees (among the approximately 900 CSO communities nationwide) that are covered by NPDES permits or other enforceable mechanisms consistent with the 1994 CSO policy	87			% permittees
States with current general NPDES permits for CAFOs or with individual NPDES permits for all CAFOs		100		% States
Comprehensive methodology tested for documenting pollutants removed through increased SSO, CSO and storm water treatment and increased wastewater treatment to secondary or better standards		1		Methodology
Minor point sources are covered by current permits	75	73%	84%	Point Sources
States with current storm water permits for all industrial activities operating in the state	92			% States
Loading reductions (pounds per year) of toxic, non-conventional and conventional pollutants from NPDES permitted facilities (POTWs, Industries, SIUs, CAFOs, SW, CSOs)			500 million	pounds
Pounds of pollutants prevented from being discharged into waters due to field technical assistance at 775 municipal wastewater treatment plants			12,000	pounds
Permits on 303(d) listed waterbodies which implement EPA approved TMDLs			90	% permits

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

Construction Grant and Special Project Closeout

In 2003 — Reduce point source loadings by closing out within 7 years projects funded under Clean Water Act Title II (construction grants) awarded after FY 91 and Special Project Stag Grants

In 2002 — Reduce point source loadings by expediting completion of projects funded under Clean Water Act Title II (construction grants) and special project STAG grants

In 2001 — Reduced point source loadings by expediting completion of 37 projects funded under Clean Water Act Title II (construction grants) and special project STAG grants

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Construction grants projects awarded after FY91 closed out within 7 years of grant award	79	90		% grants
Construction grants projects awarded before FY92 remaining to be closed out	138	13		Projects
Percentage of Construction Grants and Special Project Grants closed out within 7 years of award			90	% grants

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Special project STAG grants closed out within 7 years of grant award	78	90		% Grants

Baseline: As of September 1998 439 construction grants projects remained to be closed out, according to biannual reports from the Regions. As of September 1998, three special project STAG grants had been closed out according to biannual reports submitted by the EPA Regions to EPA Headquarters. Special project STAG grants were first established in 1994

Effluent Guidelines

In 2003: Develop effluent guidelines that when implemented are expected to reduce pollutant loadings into surface waters

In 2003: Develop regulations for cooling water intakes that when implemented are expected to reduce harm to aquatic life

In 2002: Take final action on 1 and propose 1 rule to reduce the damage to the aquatic environment caused by cooling water intakes

In 2002: Take final action on 2 and propose 3 effluent guidelines limitations for industrial categories that contribute significantly to pollution of surface waters

In 2001: Took final action on 1 and proposed 4 effluent guidelines limitations for industrial categories that contribute significantly to pollution of surface waters

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of effluent guidelines proposed or promulgated.	4 / 1	3/2		Rules
Number of cooling water intake (316(b)) regulations proposed or promulgated		1/1	1/1	Rules
At least 150 million pounds of pollutants eliminated from waters of the U.S. as a result of two final effluent guidelines			150	million pounds

Baseline: Loading reduction estimates are based on model projections from the effluent guidelines, with both the numbers of affected facilities and permits estimated

Clean Water State Revolving Fund: Annual Assistance

In 2003: 900 projects funded by the Clean Water SRF will initiate operations, including 515 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 8,800 projects will have initiated operations since program inception

In 2003: Reduce point and nonpoint source loadings by managing the $34 billion in CWSRF assets to encourage use of state funds for state high-priority projects

In 2002: 700 projects funded by the Clean Water SRF will initiate operations, including 400 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 7,900 projects will have initiated operations since program inception

In 2002: Reduce point and nonpoint source loadings by managing the $30 billion in CWSRF assets to encourage use of state funds for state high-priority projects

In 2001: 933 projects funded by the Clean Water SRF initiated operations, including 400 projects providing secondary treatment, advanced treatment, CSO correction (treatment) and/or storm water treatment. Cumulatively 7,452 SRF funded projects will have initiated operations since program inception.

In 2001: Reduce point and nonpoint source loadings by managing the $30 billion in CWSRF assets to encourage use of state funds for state high-priority projects.

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
CW SRF projects that have initiated operations (cumulative)	7,452	7,900	8,800	SRF projects
States that are using integrated planning and priority systems to make CWSRF funding decisions (cumulative)	16	18	20	States

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
States that meet or exceed "pace of the program" measures for loan issuance and construction (cumulative)	24			States
States and Puerto Rico that conduct separate annual audits of their CW SRFs	42			States
National CWSRF Federal Return on Investment as measured by cumulative assistance disbursed divided by cumulative federal outlays (Base of $1 73 in 1999)		$1 90		Ratio
National CWSRF loans as a percentage of funds available, as measured by the ratio of cumulative loan agreement dollars to the cumulative funds available for loans (base of 87 5% in 1999)		90 %	90 %	Ratio
EPA will report to Congress on the pace of the Clean Water State Revolving Fund Program	1			Report

Baseline The Agency's National Information Management System (NIMS) shows as of July 1998, 39 states/territories were conducting separate annual audits of their SRFs and utilizing fund management principles. NIMS shows, as of June 1998, 25 states were meeting the "pace of the program" measures for loan issuance, pace of construction and use of repayments. As of September 1998, 8 states were using integrated planning and priority systems to make SFR funding decisions. NIMS shows 3 909 SRF projects initiated as of June 1998

Improving Wastewater Sanitation in Indian Country

In 2003 Increase protection of human health in Indian Country by providing adequate wastewater sanitation to more of the 71,028 homes in Indian Country with inadequate wastewater sanitation systems

In 2002 Increase protection of human health in Indian Country by providing adequate wastewater sanitation to more of the 71,028 homes in Indian Country with inadequate wastewater sanitation systems

In 2001 Increased protection of human health in Indian Country by providing adequate wastewater sanitation to over 10,000 homes in Indian Country with inadequate wastewater sanitation systems

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Percent of homes in Indian Country whose residents are provided with adequate wastewater sanitation systems though funding from the CW SRF Tribal Set Aside Program (cumulative)	14	19	26	% Homes

Baseline Annual reporting established in FY 1998 by EPA and the Indian Health Service shows 71 028 homes in Indian Country without adequate treatment

Wastewater Treatment Facility Compliance

In 2003 Enhance public health and environmental protection by securing the nation's critical wastewater infrastructure through support for homeland security preparedness including vulnerability assessments, emergency operations planning, and system operator training

In 2002 Protect human health and avoid increased point source loadings by helping the approximately 17,000 small U S wastewater treatment systems to maintain permitted performance levels

In 2001 Protected human health and avoided increased point source loadings by permitting over 750 wastewater treatment systems to maintain permitted performance levels

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Wastewater treatment facilities maintaining permitted performance levels through assistance under Section 104(g) of the CWA	776	780		Facilities

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Percent of the population served by, and the number of large and medium-sized (10,001 and larger) Publicly Owned Treatment Works (POTWs) that have taken action for homeland security preparedness			65%/5000	%pop/systems

Baseline: In 1998, 890 facilities were assisted to improve, maintain, or achieve compliance

Wastewater Treatment

In 2003: Reduce human health risks and nonpoint source loadings from the approximately 11 million failing septic systems that pollute drinking water supplies, playgrounds and beaches back up into homes and damage shellfish and other aquatic life

In 2002: Reduce human health risks and nonpoint source loadings from the approximately 11 million failing septic systems that pollute drinking water supplies, playgrounds and beaches back up into homes and damage shellfish and other aquatic life

In 2001: Reduced human health risks and nonpoint source loadings from the approximately 11 million failing septic systems that pollute drinking water supplies, playgrounds and beaches back up into homes and damage shellfish and other aquatic life

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
States which adopt the Voluntary Management Guidelines for On-site Wastewater Treatment Systems	0	2	4	States

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

Reducing Nonpoint Source Pollution

In 2003: Reduce nonpoint source sediment and nutrient loads to rivers and streams.

In 2002: Reduce nonpoint source sediment and nutrient loads to rivers and streams

In 2001: Reduced nonpoint source sediment and nutrient loads to rivers and streams by ensuring that 5% of AFOs have developed Comprehensive Nutrient Management Plans (CNMPs)

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
AFOs for which Comprehensive Nutrient Management Plans (CNMPs) are developed. (cumulative)	5%	10%		AFOs
Clean Water SRF loaned for projects to prevent polluted runoff	6			% CW SRF
Number of coastal States and Territories with fully approved coastal nonpoint pollution control programs under the Coastal Zone Act Reauthorization Amendments of 1990 (cumulative)		18	29	States/Tribes
Number of States and Territories reporting data on their ongoing progress in implementing their nonpoint source programs, including geo-location of projects and load reduction estimates.		56		States/Tribes
Clean Water SRF loaned for projects to prevent polluted runoff (annual)		200	200	M Dollars

Baseline: As of September 1998, 24 states were funding nonpoint and estuary projects with their SRFs

Verification and Validation of Performance Measures

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

Performance Database: The Permits Compliance System (PCS) will be used to determine which permits have not exceeded their expiration dates. This includes fields for permit issuance and expiration dates for individual permits only. EPA has carried out detailed backlog tracking with PCS data since November 1998 and has hard copies of historical reports since the early 1980s.

Data Source: Regions and states enter data into PCS.

QA/QC Procedures: HQ reviews data submitted by states as part of the QA/QC process. The Office of Water (OW) has generated state-by-state reports listing what appears in PCS for key data fields for facilities and discharge pipes (name, address, Standard Industrial Classification (SIC) code, latitude/longitude, Hydrologic Unit Code (HUC), reach, flow, issuance date, expiration date, application received date, effective date, etc.). These reports were distributed in January 2001 to state and regional PCS, National Pollutant Discharge Elimination System (NPDES), and Geographic Information Systems (GIS) coordinators to allow states to "see what EPA sees" when it views PCS data. Where discrepancies exist between state and PCS data, OW is identifying such discrepancies and making corrections in PCS, where necessary. Additionally, many states have been collecting and verifying NPDES data on their own, but maintain these data in separate state-level systems (electronic and hardcopy). EPA plans to populate fields in PCS that are currently blank with existing state-level data provided by states.

Data Quality Review: Office of Inspector General (OIG) audits 8100076 (3/13/98) and 8100089 (3/31/98) discussed the need for current data in PCS. OW is categorizing the form in which the data exist at the state level (e.g., currently in PCS, currently in a separate state system, currently in hard copy only). As EPA creates a picture of national PCS data availability, staff are working with individual states and regions to tailor approaches to getting key data into PCS. OW is offering data upload, data entry, and, if necessary, data compilation support to states and anticipates completion of the project by the end of calendar year 2001.

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

New/Improved Data or Systems: EPA headquarters is providing contractor assistance to improve the data quality of PCS. By 2003, PCS is scheduled to be modernized to make it easier to use and to ensure that it includes all needed data to manage the National Pollution Discharge Elimination program.

Performance Measure (PM): Loading reductions (pounds per year) of toxic and non-conventional, and conventional pollutants from NPDES permitted facilities (POTWs, Industries, Significant Industrial Users (SIUs), Confined Animal Feeding Operations (CAFOs), Storm Water (SW), Combined Sewer Operations (CSOs)).

Performance Database: The Permits Compliance System(PCS) will be used for available information on permitted facilities, including SIC codes, flow, and location data. Other databases that may be used include the Clean Water Needs Survey for treatment-level information, the storm water Notice of Intent (NOI) database to determine facilities covered under storm water general permits, the National Oceanic and Atmospheric Administration (NOAA) Rainfall Database for precipitation information, and STORET for water quality information. The data in these databases will be used to model loadings from NPDES permitted facilities. However, data are not available for all categories of dischargers or for all dischargers in each category. Data are particularly lacking for storm water dischargers.

Data Sources: Regions and states enter data into PCS, the Needs Survey, and STORET. NOI data is provided by applicants for coverage under general permits (both storm water and non-storm water) and limited data elements are entered into PCS by some states. Where EPA is the permitting authority, EPA contractors enter storm water NOI data in a separate database. EPA has collected effluent guidelines development data for various industrial categories. NOAA enters data in the Rainfall Database. EPA is collecting Best Management Practices (BMP) effectiveness data from various studies. And EPA is collecting Combined Sewer Overflow (CSO) data from states EPA for required reports to Congress: these data should ultimately reside in PCS.

QA/QC Procedures: EPA reviews critical data submitted by states. Some databases, such as STORET require documentation of the quality of the data along with the data entry. With respect to PCS, EPA has a project underway to work with states to improve the data in PCS (See earlier narrative for "Major/Minor Point Sources Covered by Current Permits.") Load reductions are estimated by modeling the various categories of sources. Actual data will be used to calibrate and verify the models used.

Data Quality Reviews: See earlier narrative for "Major/Minor Point Sources Covered by Current Permits."

Data Limitations: There are significant data gaps in PCS, including reliability issues, for minor facilities, general permits, and specific categories of discharges, such as CAFOs. Additionally, neither monitoring nor flow data are required for certain categories of general permits. The Agency, therefore, is not able to provide sufficient information to measure loadings reductions for all of the approximately 550,000 facilities that fall under the NPDES program.

New/Improved Data or Systems: EPA Headquarters is providing contractor assistance to improve the data quality in PCS. By 2003, PCS is scheduled to be modernized to make it easier to use. As the modernized system is being developed, additional efforts are underway to bolster

comprehensive data collection to ensure that the modernized system includes data needed to manage the National Pollutant Discharge Elimination program.

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

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

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

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

Data Quality Review: EPA headquarters and regions annually review the data submitted by states.

Data Limitations: None

New/Improved Data or Systems: This system has been operative since 1996. It is updated on an annual basis, and database fields are changed or added as needed.

Coordination with Other Agencies

National Pollutant Discharge Elimination System Program (NPDES)

Since inception of the NPDES program under Section 402 of the Clean Water Act, EPA and the authorized states have developed expanded relationships with various Federal agencies to implement pollution controls for point sources. EPA works closely with the Fish and Wildlife Service and the National Marine Fisheries Service on consultation for protection of endangered species through a Memorandum of Agreement. EPA works with the Advisory Council on Historic Preservation on National Historic Preservation Act implementation. EPA and the states rely on monitoring data from the U.S. Geological Survey (USGS) to help confirm pollution control decisions. The Agency also works closely with the Small Business Administration and the Office of Management and Budget to ensure that regulatory programs are fair and reasonable. The Agency coordinates with the National Oceanic and Atmospheric Administration (NOAA) on efforts to ensure that NPDES programs support coastal and national estuary efforts; and with the Department of Interior on mining issues.

Joint Strategy for Animal Feeding Operations

The Agency is working closely with the Department of Agriculture (USDA) to implement the Unified National Strategy for Animal Feeding Operations finalized on March 9,

1999. The Strategy sets forth a framework of actions that USDA and EPA plan to take, under existing legal and regulatory authority, to minimize water quality and public health impacts from improperly managed animal wastes in a manner designed to preserve and enhance the long-term sustainability of livestock production. EPA has had regular meetings with USDA on the CAFO rule and the Cost and Capability study and has planned coordinated funding for targeted watersheds.

Clean Water State Revolving Fund (CWSRF)

Representatives from EPA's SRF program, Housing and Urban Development's (HUD's) Community Development Block Grant program, and USDA's Rural Utility Service have signed a Memorandum of Understanding committing to assisting state or Federal implementers in: (1) coordination of the funding cycles of the three Federal agencies; (2) consolidation of plans of action (operating plans, intended use plans, strategic plans, etc.); and (3) preparation of one environmental review document, when possible, to satisfy the requirements of all participating Federal agencies. A coordination group at the Federal level has been formed to further these efforts and maintain lines of communication. In many states, coordination committees have been established with representatives from the three programs.

Clean Water SRF Indian Set Aside - Indian Health Service and Rural Utilities Service

In implementation of the Indian set-aside grant program under Title VI of the Clean Water Act, EPA works closely with the Indian Health Service to administer grant funds to the various Indian Tribes, including determination of the priority ranking system for the various wastewater needs in Indian Country.

In 1998, EPA and the Rural Utilities Service of the Department of Agriculture formalized a partnership between the two agencies to provide coordinated financial and technical assistance to Indian Tribes.

Construction Grants Program - US Army Corps of Engineers

Throughout the history of the construction grants program under Title II of the Clean Water Act, EPA and the delegated states have made broad use of the construction expertise of the Corps of Engineers to provide varied assistance in construction oversight and administrative matters. EPA works with the Corps to provide oversight for construction of the special projects which Congress has designated. The mechanism for this expertise has been and continues to be an Interagency Agreement between the two agencies.

Nonpoint Sources

EPA will continue to work closely with its Federal partners to achieve the ambitious strategic objective of reducing pollutant discharges, including at least 20 percent from 1992 erosion levels. Most significantly, EPA will continue to work with the U.S. Department of Agriculture (USDA), which has a key role in reducing sediment loadings through its continued

implementation of the Environmental Quality Incentives Program, Conservation Reserve Program, and other conservation programs. USDA also plays a major role in reducing nutrient discharges through these same programs and through activities related to the AFO Strategy. EPA will also continue to work closely with the Forest Service and Bureau of Land Management, whose programs can contribute significantly to reduced pollutant loadings of sediment, especially on the vast public lands that comprise 29 percent of all land in the United States. EPA will work with these agencies, USGS, and the states to document improvements in land management and water quality. Finally, EPA is teaming with NOAA to track an annual performance goal regarding approval of states' coastal nonpoint source control programs.

EPA will also work with other Federal agencies to implement the Unified Federal Policy for a watershed approach to Federal land and resource management. This policy provides a foundation to help ensure that Federal land management agencies serve as a model for water quality stewardship in the prevention of water pollution and the restoration of degraded water resources. Implementation of the policy will require coordination among Federal agencies at a watershed scale and collaboration with states, Tribes and other interested stakeholders.

Air Deposition

EPA is working with NOAA, as well as with state air and water programs and National Estuary Programs where the impacts of air deposition are of concern. EPA plans to continue to work with other Federal agencies such as USGS to address atmospheric deposition problems.

Coordination with Other Agencies

Research

Research on the ecosystem effects of Wet Weather Flows (WWFs) is divided into three categories: 1) watershed management for WWFs; 2) control technology for drainage systems; and 3) infrastructure improvement. Implementation of this work is guided by the "Risk Management Research Plan for Wet Weather Flows." This research plan was peer-reviewed by the Urban Water Resources Research Council of the American Society of Civil Engineers (ASCE) and the Water Environment Research Foundation of the Water Environment Federation. Projects under the WWF research plan are being coordinated with projects under Section 104(b)(3) of the Clean Water Act (CWA). This plan is also being used to coordinate relevant work being conducted by others such as the Water Environment Research Foundation's Wet Weather Advisory Panel, the ASCE Urban Water Resources Research Council, the U.S. Department of Agriculture, the U.S. Centers for Disease Control and Prevention (CDC), the Army Corps of Engineers (USACE), the U.S. Geological Survey (USGS), the Sanitary Sewer Overflow (SSO) Advisory Committee and Urban WWF Subcommittee, and other national and international organizations that work to improve coordination and minimize duplication of WWF research.

EPA is partnering with numerous other Federal and state agencies on WWF research projects. For example, the Agency signed a three-year interagency agreement (IAG) with

USACE at the Waterways Experiment Station (WES) in Vicksburg, Mississippi, to develop a numerical watershed model that will predict change in stream channels from land use change. Both organizations have an inherent interest in developing the tools to predict such geomorphologic changes. Land use changes alter storm water runoff patterns which upset the established equilibrium between the flow, shape, and course of the streambed (stream geomorphology). Under this IAG the USACE will modify an existing river model to account for erosion in small streams.

Also, EPA is pursuing collaborative research projects with the USGS to utilize water quality data from urban areas obtained through their National Ambient Water Quality Assessment (NAWQA) program. The USGS data for urban streams show levels of pesticides that are even higher than in many agricultural area streams These data have potential uses for identifying sources of urban pesticides. EPA will evaluate how the USGS data could be integrated into the GIS database system.

Statutory Authorities

Clean Water Act
Clean Air Act
Coastal Zone Act Reauthorization Amendments of 1990
Safe Drinking Water Act
Toxic Substances Control Act
Wet Weather Water Quality Act of 2000

Research

Clean Water Act
Clean Air Act
Coastal Zone Act Reauthorization Amendments of 1990
Safe Drinking Water Act
Toxic Substances Control Act

Goal 3: Safe Food III-1
Reduce Risks from Pesticide Residues in Food III-11
Eliminate Use on Food of Pesticides Not Meeting Standards III-20

Safe Food

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Safe Food	$124,949.3	$110,537.1	$109,814.6	($722.5)
Reduce Risks from Pesticide Residues in Food	$44,288.8	$47,609.6	$45,290.4	($2,319.2)
Eliminate Use on Food of Pesticides Not Meeting Standards	$80,660.5	$62,927.5	$64,524.2	$1,596.7
Total Workyears	817.1	780.2	770.1	-10.1

Background and Context

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

EPA uses the latest scientific information to ensure that there is "a reasonable certainty" that no harm will result to human health from all combined sources of exposure to pesticides (aggregate exposures). Moreover, it submits for review its pesticide regulations and related science issues to the Science Advisory Panel (SAP), an independent, expert advisory committee whose members are nominated by the National Institutes of Health and the National Academy of Sciences. The SAP plays a critical role in EPA's decision-making process, assuring decisions that impact on health and the environment rely on sound science.

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

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

- 30 major pesticide producers and another 100 smaller producers
- 2500 formulators
- 29,000 distributors and other establishments
- 40,000 commercial pest control firms
- 1 2 million pesticide applicators
- One million farms
- Several million industry and government
- users
- About 100 million households

Source OPP's Pesticides Industry Sales and Usage Report

All pesticides are subject to EPA regulation including insecticides, herbicides, fungicides, rodenticides, disinfectants, plant growth regulators, plant incorporated protectants and other substances intended to control pests. Pesticides are used in agriculture, greenhouses, on lawns, in swimming pools, industrial buildings, households, and in hospitals and food service establishments. The total U.S. pesticide usage in 1997 was 4.6 billion pounds, according to the report, *"Pesticide Industry Sales and Usage: 1996 and 1997"* (http://www.epa.gov/oppbead1/pestsales). Agriculture accounts for about 80 percent of all pesticide applications. Herbicides are the most widely used pesticides and account for the greatest expenditure and volume, approximately $6.6 billion and 568 million pounds in 1997. Biopesticides and reduced risk pesticides are assuming an increasingly important role. For example, safer pesticides, which include biopesticides and reduced risk pesticides, increased in use from 3.6% in 1998 to 7.1% of total pounds applied in 2000 (Doane Marketing Research, Inc.: http://www.doanemr.com).

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

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

Amendments to both FIFRA and FFDCA by the Food Quality Protection Act (FQPA) of 1996 enhances protection of children and other sensitive sub-populations. FQPA establishes a single, health-based safety standard for all pesticide residues. The agency-wide FY 2003 request supporting FQPA includes $142.3 million for EPA's work under these laws, enabling the public to enjoy one of the safest, most abundant, and most affordable food supplies in the world. FQPA also enhanced EPA's ability to protect human health and the environment in several other ways, including:

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

Means and Strategy

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

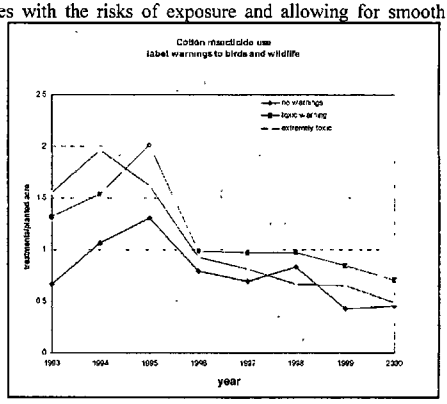
- Assuring that new chemicals and new uses are registered in accordance with the FQPA's strict standard, "reasonable certainty of no harm," and that no harm will result to human health from all combined sources of exposure to pesticides (aggregate exposures);
- Assuring that pesticide maximum legally allowable tolerances for foods eaten by children are in conformance with FQPA requirements that protect children;
- Re-evaluating older, potentially higher-risk pesticides using the best current scientific data and methods to determine whether additional limits on a pesticide's use are needed to provide reasonable certainty of no harm, especially for children and other sensitive populations; and
- Expediting review and registration of alternative pesticides that are less risky than pesticides currently in use and may be substituted effectively for higher risk pesticides.

In 2003, the Agency will continue to promote accelerated registrations for pesticides that provide improved risk reduction or risk prevention compared to those currently on the market. Progressively replacing older, higher-risk pesticides is one of the most effective methods for curtailing adverse impact on health and the ecosystem while preserving food production rates.

EPA uses its authorities to manage systematically the risks of pesticide exposures by establishing legally permissible food-borne pesticide residue levels, or tolerances. EPA defines the legal use of pesticides, up to and including the elimination of pesticides that present a danger to human health and the environment. This task involves a comprehensive review of existing pesticide use as stipulated by the reregistration provision, as well as a comprehensive reassessment and update of existing tolerances within ten years, as required by FQPA.

The 2003 request emphasizes efforts to evaluate existing tolerances for currently registered pesticides to ensure they meet the new Food Quality Protection Act (FQPA) health standards. This tolerance reassessment program screens and requires testing of certain pesticides and chemicals to evaluate their potential for disrupting endocrine systems in animals or in humans. The emphasis will be on balancing the need for pesticides with the risks of exposure and allowing for smooth transitions to safer pesticide alternatives, through an open and transparent process that seeks input from all stakeholders.

EPA uses the latest scientific advances in health-risk assessment practices, to ensure that current pesticides meet the standard of a reasonable certainty of no harm, as stipulated by FQPA. This includes the incorporation of new scientific data relating to the effects of endocrine disruption and the special needs of susceptible populations such as children and Native Americans.



Adoption of biotechnology has great potential to reduce reliance on some older, more risky chemical pesticides, and to lower worker risks. For example, the use of Bt cotton has affected the use of other insecticides which present higher risk to wildlife. According to the reported number of insecticide treatments per planted acre of cotton, use of insecticides labeled either toxic or extremely toxic to wildlife has undergone significant reduction since 1995, the extremely toxic pesticides decreasing from 1.6 to 0.5 acre treatments, a 68% reduction. (See chart.)

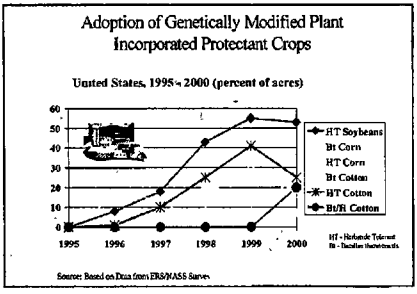
Outreach activities on the subject of biotechnology such as public meetings and scientific peer reviews of our policies and assessments are likely to be expanded to keep pace with changing science and the public's demand for information in this area. EPA is working closely with other federal agencies involved in biotechnology and is also actively involved in developing international standards for the regulation of biotechnology products. Specific activities in 2003 will include advancing scientific knowledge of allergenicity (i.e.human allergic reactions to pesticide residues); continued implementation of the Plant Incorporated Protectant rule, which defines the type of substances used in bioengineered plants that must undergo scientific evaluation by the Agency; and participating in the Codex Ad Hoc Intergovernmental Task. Force on Food Derived from Biotechnology. The Task force is involved in developing international standards governing foods derived from biotechnology.

Use of biotechnology to modify plants so that they resist harmful insects or the effects of herbicides is likely to attract continued public scrutiny, particularly on issues such as allergenicity and gene transfer. Biotechnology is becoming increasingly more important in our economy with bioengineered plants accounting for a larger share of acres planted than ever before in the United States. For example, in 1996, Herbicide Resistant (HT) Soybeans accounted for only 8% of the total

U.S. acres planted in soybeans. In 2000, HT Soybeans accounted for 53% of the acres planted for other crops, trends also indicate increases, though not as dramatically as for soy (see chart).

While certain issues remain to be addressed, among the potential benefits of biotechnology is a reduction of our reliance on some older, more risky chemical pesticides, thereby reducing worker exposure to these chemical pesticides. To ensure the safety of foods derived from biotechnology, EPA will continue to seek outside expert scientific advice through scientific peer reviews on our regulatory decisions, policies, methods and tools.

New registration actions result in more pesticides on the market that meet the strict FQPA pesticide risk-based standards, which brings the Agency closer to the objective of reducing adverse risks from pesticide use. Tolerance reassessments may mean mandatory use changes because a revision in the allowable residue levels can involve changes in pesticide application patterns, changes in the foods the pesticides may be applied to, and other risk management methods. As measured by the number of tolerances that have been reassessed, the Agency's progress in the tolerance reassessment program directly serves the objective of reducing the use on food of pesticides that do not meet the new standards.



In addition to setting the requirements for continued legal use of agricultural pesticides, EPA works in partnership with USDA, FDA and the states toward the broader effort to prevent the misuse of pesticides. In the ever changing environment of pesticide use, accessibility to information is a primary component of an effective strategy to inform the public on the appropriate, safe use of pesticides to minimize risk.

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

Research

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

To support the Food Quality Protection Act (FQPA), EPA must develop the tools (methods, models, approaches) and quality exposure data for characterizing aggregate risks from exposure to pesticides in order to reduce uncertainty in risk assessments. The FQPA identifies clear science needs, including the evaluation of all potential routes and pathways of exposures to pesticides, and resulting health effects, particularly for sensitive subpopulations and considering effects from cumulative exposures.

EPA's research program will continue to focus on: 1) developing and validating methods to identify and characterize, as well as models to predict, the potential increased susceptibility to human health effects experienced by infants and children; 2) identifying and understanding major exposure routes, pathways, and processes, and developing theoretical and experimentally based multipathway exposure models for pesticides and other toxic substances; and 3) addressing the adequacy of current risk assessment methods and providing the necessary risk assessment guidance.

Strategic Objectives and FY 2003 Annual Performance Goals

Reduce Risks from Pesticide Residues in Food

- Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment, through ensuring that all registration action are timely and comply with standards mandated by law.
- Occurrence of residues of carcinogenic and cholinesterase inhibiting neurotoxic pesticides on foods eaten by children will have decreased by 20 percent (cumulative) from their average 1994 to 1996 levels.
- At least six percent of acre-treatments will use applications of reduced risk pesticides.

Eliminate Use on Food of Pesticides Not Meeting Standards

- Assure that pesticides active ingredients registered prior to 1984 and the products that contain them are reviewed to assure adequate protection for human health and the environment. Also consider the unique exposure scenarios such as subsistence lifestyles of Native Americans in regulatory decisions.
- By the end of 2003 EPA will reassess a cumulative 68% of the 9,721 pesticide tolerances required to be reassessed over ten years and complete reassessment of a cumualtive 75% of tolerances of special concern in protecting the health of children.

Highlights

Reduce Public Health Risk from Pesticide Residues

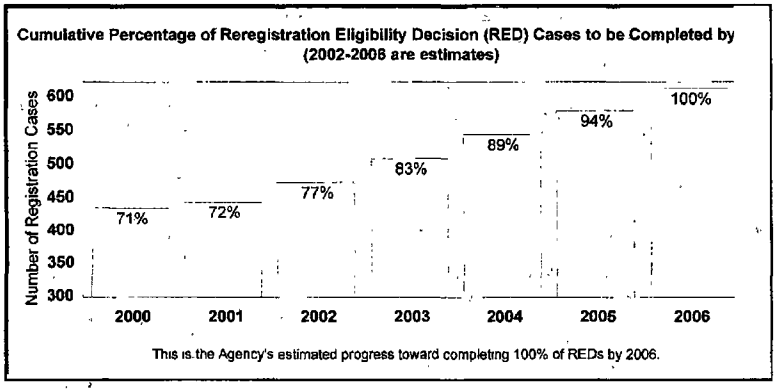
FFDCA and FIFRA authorize EPA to set terms and conditions of pesticide registration, marketing and use. EPA will use these authorities to reduce residues of pesticides with the highest potential to cause cancer or neurotoxic effects, including those which pose particular risks to children and other susceptible populations. All new pesticides, including food/feed-use pesticides are registered after an extensive review and evaluation of human health and ecosystem studies and data, applying the most recent scientific advances in risk assessment. The Registration program includes registration activities, such as setting tolerances, registering new active ingredients and new uses, and handling experimental use permits and emergency exemptions.

In 2003, the Agency will continue its efforts to decrease the risk the public faces from agricultural pesticides through the regulatory review of new pesticides, including reduced risk pesticides and biopesticides. EPA expedites the registration of reduced risk pesticides, which are generally presumed to pose lower risks to consumers, lower risks to agricultural workers, and lower risk to the earth's ozone layer, groundwater, aquatic organisms or wildlife. These accelerated pesticide reviews provide an incentive for industry to develop, register, and use lower risk pesticides. Additionally, the availability of these reduced risk pesticides provides alternatives to older, potentially more harmful products currently on the market.

Reduce Use on Food of Pesticides Not Meeting Current Standards

In FY 2003, the Agency will continue its review of older pesticides and move forward toward its ten year statutory deadline of reassessing all 9,721 tolerances, after meeting the statutory deadline of reassessing a cumulative 66 percent of those tolerances by August 2002. The Agency will also continue to develop tools to screen pesticides for their potential to disrupt the endocrine system. In 2003, EPA will work toward completing 17 Reregistration Eligibility Decisions (REDs), 750 product reregistrations and 225 tolerance reassessments.

The tolerance reassessment process addresses the highest-risk pesticides first. Using data surveys conducted by the USDA, the FDA and other sources, EPA has identified a group of "top 20" foods consumed by children and matched those with the tolerance reassessments required for pesticides used on those foods. The Agency has begun to track its progress in determining appropriate tolerances for these pesticides under the new FQPA standards. In 2003, EPA will continue its effort to reduce dietary risks to children, by completing approximately a cumulative 75 percent of these tolerances of special concern.



Two widely used groups of pesticides, organophosphates and carbamates, are believed to pose higher risks, particularly to children. Curtailing or restricting the use of these pesticides will significantly change current farming practices that have relied upon them, by adopting integrated

pest management strategies that draw on cultural, biological, and mechanical techniques as well as chemical. With new strategies comes a steep learning curve on how to use them effectively. This transition requires broad input and participation by stakeholders to minimize adverse, unintended consequences on agriculture. To achieve input, EPA developed a special process for its stakeholder for addressing data analysis and regulatory requirements, protocols, and scientific and public review as the Agency continues to reduce risks posed by these pesticides through regulatory actions. The Agency will continue this important dialogue with stakeholders as we protect human health and the environment by assessing risks of other groups of pesticides.

EPA's authority to collect Reregistration Maintenance Fees expires at the end of FY 2002 under the 2002 appropriations bill for the Agency. The 2003 request substitutes appropriated funds for fees to fund the reregistration program. The appropriated dollars for this were reprogrammed from the tolerance assessment program which will be funded by fee revenue starting in March 2003.

The Reregistration program was accelerated by the 1988 amendments to FIFRA and enhanced by FQPA, which includes a tolerance reassessment requirement. Through the Reregistration program, EPA reviews pesticides currently on the market to ensure they meet the latest health standards. Pesticides not in compliance with the new standards will be eliminated or restricted in order to minimize potentially harmful exposure. The issuance of a Reregistration Eligibility Decision (RED) for a pesticide under reregistration review summarizes the health and environmental effects findings of that pesticide and determines whether existing tolerances protect human health and the environment. The findings determine whether the products registered under this chemical are eligible for reregistration. The Agency's progress in achieving goals for production of REDs and its tolerance reassessment component are summarized in the chart.

FQPA added considerably more complexity into the pesticide reregistration process lengthening the "front end" of reregistration. These requirements include considering aggregate exposure and cumulative risk in our risk assessments, implementing new processes to increase involvement of pesticide users and other stakeholders, and ensuring a reasonable opportunity for agriculture to make the transition to new, safer pest control tools and practices. Over the longer run, these changes will enhance protection of human health and the environment.

Pesticide reregistration is a statutory requirement under the 1988 amendments to FIFRA. Under the law, all pesticides registered prior to November 1984 must be reviewed to ensure that they meet current health and safety standards. The 1996 Food Quality Protection Act requires the reassessment of pesticide tolerances by 2006. Many pesticides must be reviewed under both statutes.

The program has been working to integrate new FQPA requirements with the reregistration program to avoid duplication and increase efficiency. Implementing FQPA has also consumed time and effort as the technical challenge posed by reregistration of older pesticides has been increased by the health and safety enhancements of FQPA, including:

- review of inert ingredients;
- reform of the antimicrobial review process;
- transparency of our regulatory decisions;
- incorporation of aggregate and cumulative risk into our reviews;
- special protection for infants and children; and

- endocrine screening of pesticides, minor use enhancements and reduced risk registration emphasis.

These and other additional requirements required that the Agency revise, in some cases overhaul, its existing policies, procedures, process, and databases. The Agency also needed to consider a reasonable transition to FQPA for agriculture, and thus a substantive stakeholder participation process had to be developed for input from those affected. All these considerations resulted in the temporary slow-down of the program.

By the end of FY 2003, EPA expects to have implemented EPA's science policies, including the cumulative risk policy, to meet the ten-year tolerance reassessment deadline. As required by FQPA, EPA has developed a tolerance fee rule that recovers from pesticide manufacturers the full cost of setting and reevaluating pesticide tolerances on food.

Additionally, to meet another FQPA need, EPA is developing a process for periodic review of pesticide registrations. This new program will update all pesticide registrations using current health standards, scientific data, risk assessment methodologies, program policies and effective risk reduction measures. In 2003, the Agency will continue developing and refining the framework for the registration review program.

Research

In FY 2003, EPA's research program will continue to develop pesticides exposure and effects data, risk assessment methods and models for children, and control technologies needed to comply with the requirements of Food Quality Protection Act (FQPA) - effectively engaging all components of the risk paradigm.

Specifically, exposure research will address major exposure data gaps, distributions of key exposure factors (especially across age groups for children and exposures for other susceptible subpopulations), and uncertainties associated with the exposure assessment requirements for FQPA. Health effects research will also develop methods to evaluate the effects of cumulative exposures to pesticides and toxic chemicals, including both long-term exposures and multiple acute exposures. Risk assessment research will continue to compare pesticide exposures across age groups, identify factors leading to higher exposures, and analyze data to improve the evaluation of exposure factors for pesticide risk assessment. Results will support risk assessments under FQPA and the development of Agency guidelines for cumulative risk assessment through the EPA Risk Assessment Forum (ERAF). Risk management research will evaluate characteristics of commonly used pesticides or pesticides of particular concern to determine which chemicals should be targeted for development of risk management tools.

External Factors

The ability of the Agency to achieve its strategic objectives depends on several factors over which the Agency has only partial control or little influence. EPA relies heavily on partnerships

with states, Tribes, local governments and regulated parties to protect the nation's food supply, the environment, and human health, from pesticides.

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

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

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

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

Safe Food

Objective: Reduce Risks from Pesticide Residues in Food

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Reduce Risks from Pesticide Residues in Food	**$44,288.8**	**$47,609.6**	**$45,290.4**	**($2,319.2)**
Environmental Program & Management	$37,994.5	$45,325.3	$42,964.7	($2,360.6)
Rereg. & Exped. Proc. Rev Fund	$3,790.4	$0.0	$0.0	$0.0
Science & Technology	$2,503.9	$2,284.3	$2,325.7	$41.4
Total Workyears	318.5	337.0	331.1	-5.9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$209.7	$0.0	$0.0	$0.0
Endocrine Disruptor Screening Program	$2,279.9	$1,860.4	$2,096.3	$235.9
Facilities Infrastructure and Operations	$4,250.0	$4,725.2	$4,462.6	($262.6)
Homeland Security	$0.0	$602.6	$0.0	($602.6)
Legal Services	$996.7	$1,019.7	$1,095.3	$75.6
Management Services and Stewardship	$460.2	$504.0	$420.6	($83.4)
Pesticide Registration	$29,613.9	$31,832.4	$30,882.2	($950.2)
Pesticide Reregistration	$5,371.5	$6,227.0	$5,673.4	($553.6)
Pesticide Residue Tolerance Reassessments	$1,177.4	$813.3	$660.0	($153.3)
Safe Pesticide Applications	$0.0	$25.0	$0.0	($25.0)

FY 2003 Request

This request highlights improving the safety of our food supply and continues emphasis on implementing FQPA, especially in the protection of infants and children. The Agency will expand partnerships with the United States Department of Agriculture (USDA), Food and Drug Administration (FDA) and other components of the Department of Health and Human Services (HHS), and with the international Organization for Economic and Cooperation Development (OECD) and others to engage and share information with stakeholders and to develop and facilitate the implementation of strategies for the public, industry and agriculture to conduct a smooth transition to safer pest management for food crops. EPA will continue to ensure that the best available science is incorporated into the implementation of the statute.

Pesticides currently on the market with approved food uses include some which are suspected human carcinogens, neurotoxins or endocrine disruptors and thus may pose significant health concerns, especially to children. FQPA provides unprecedented opportunities to protect human health and to impact positively agricultural production techniques, lessening the overall risk of pesticide use. FQPA further requires that the Agency review pesticides on a periodic basis to ensure that those registered for use meet the most current health standards. Through this registration review, FQPA ensures that when properly used, there is "a reasonable certainty of no harm" to human health or the environment. The review of existing pesticides through reregistration and tolerance reassessment combined with the availability of safer pesticides through registration, continues to improve the risk picture for agriculture.

Registration Activities

Under the Registration program, EPA registers new pesticides after extensive review and evaluation of human health and ecological effects studies and data. As part of the process, the Agency analyzes data and sets a tolerance level for each crop or crop grouping (use) the registrant requests for the specific pesticide. The tolerance level is the legal limit for how much pesticide may remain on a food. The Registration program gives priority to accelerated processing of reduced risk pesticides which may substitute for products already on the market, thus giving farmers and other users new tools which are better for health and the environment.

There are many types of registration requests submitted by industry for EPA approval. These include requests for registration of new active ingredients, new pesticides which may simply be new formulations of ingredients already registered (me-toos), new uses which add a crop type to the approved uses of the registered pesticide and minor uses for low volume crops.

FQPA also requires that EPA review inert ingredients added to pesticide products. These "inert" ingredients have no pesticidal properties; however, these agents are often chemically active and must be reviewed for unintended effects on humans and the environment. Increased public education and full ingredient disclosure (including inerts) on pesticide product labels must be balanced to protect confidential business information (CBI) from being disclosed.

In March 2000, the Agency established a diverse workgroup with members from public health, environmental, industry, academic, and state government organizations to address measures to increase the availability of information about inerts to the public. The workgroup presented the risk assessment methodology for inerts to the Pesticide Program Dialogue Committee (PPDC) in December 2001. The Agency has made great strides in incorporating FQPA requirements into its registration program, but as resources become more scarce, continued effort in inerts review may be delayed due to more pressing priorities such as antimicrobial reregistration, tolerance reassessments and reduced risk registrations.

During the last several years, the Agency has engaged the public and the scientific community in developing and reviewing nine science policies that shape EPA's approach to screening pesticides. While all of the policies are significant, the requirements to consider cumulative and aggregate risk and the ten-fold safety factor for children's health have important ramifications for chemical risk assessments of many chemicals. Cumulative risk requires that EPA consider the combined effects of exposures to multiple chemicals sharing a common mechanism of toxicity. Pesticides that are widely used and have a common mechanism of toxicity are often riskier Aggregate exposure brings issues of residential exposures and drinking water residues into the equation. The extra ten-fold safety factor impacts risk assessments affecting children's health. A lower factor can be used, " . . . only if, on the basis of reliable data, such margin will be safe for infants and children." In 2003, the Agency will continue implementation of its policy for assessing cumulative risk for these groups of chemicals and continue applying this policy to pesticide registration and reregistration decisions, further ensuring the safety of our food supply.

EPA will continue to actively encourage and engage the pesticide industry, farmers and the public to participate in the implementation of FQPA. EPA uses common-sense strategies for reducing risk to acceptable levels while retaining those pesticides of the greatest public value, including those employed in minor uses and integrated pest management needs. In FY 2003, EPA will continue to work with the pesticide industry and farmers to explore new pest management approaches and to provide a reasonable phase-out period for canceled pesticides. EPA will also continue its stakeholder consultation process through regular meetings with Committee to Advise on Reassessment and Transition (CARAT), an advisory body composed of environmental/public interest groups; pesticide industry and trade associations; pesticide user, grower, processor and commodity organizations; public health organizations, including children's health representatives; Federal agencies; State, local and tribal governments; academia; consumers and the public.

States and industry submit requests for registration actions to meet rapidly changing or emerging needs, including petitions for temporary uses of pesticides to meet emergency conditions, and for research purposes. The Agency allows for the unpredictability of agricultural conditions and pest outbreaks and takes action to meet emerging needs. These actions include issuance of emergency exemptions under FIFRA sec. 18, which allows the use, for a limited time, of a pesticide not registered for that specific purpose. Emergency conditions could include controlling a new pest or the spread of a pest to new areas, or controlling an outbreak of a pest that poses a public health risk, such as the West Nile virus spread by migration. FIFRA addresses other special needs, including provisions to register products by states for specific local uses not federally registered and provisions for experimental use permits (under FIFRA sec.5), which allow pesticide producers to

test new pesticide uses outside the laboratory to generate information to apply for amendments to previously approved pesticides (e.g., to reflect label revisions or changed formulations for products already registered).

The Agency and USDA work collaboratively to ensure minor use registrations receive appropriate support. EPA policy has defined minor uses as pesticide usage on crops grown on less than 300,000 acres. Although minor use pesticides are of major significance in agricultural production and to growers and consumers, they produce relatively little revenue for their manufacturers, considering the cost of maintaining these registrations. Without these small-scale but vital pesticide uses, many of the fruits, vegetables, and ornamentals grown in the U.S., worth billions of dollars, could not be produced successfully. In FY 2003, EPA and USDA will continue to work closely to meet the need for newer, reduced risk pesticides registered for minor uses. As needed, the Agency uses the data collected under USDA's IR-4 program to establish tolerances for minor uses and provides priority status for registrations for vulnerable crops and minor agricultural uses.

Interregional Research Project No. 4

The Interregional Research Project No. 4 (IR-4) helps minor crop producers obtain tolerances and registrations for pest control products. It supports development of test data in support of registrations and tolerances for these products and prepares specific instructions on the use of pesticides which appear on the label of the pesticide product. The IR-4 was organized in 1963 by the Directors of State Agricultural Experiment Stations. Minor crops account for about 40 percent of the total agricultural sales for the U.S.

Bioengineered crops are playing an ever increasing role in the agricultural marketplace and each bioengineered product must be reviewed to ensure adequate safety to the public and environment alike. As with any new technology, there is lively public and scientific debate of the best ways to incorporate the products into the market and the possible long-term implications for agriculture. EPA must keep abreast of new science and perform its traditional role of evaluating the types of organisms being used for the genetic modification, the stability of the genetic insert in the environment, and the potential exposures of workers and consumers to the biotechnology product. Other areas of concern include potential impacts on non-target organisms and the potential for pests to become resistant to the bioengineered product. The Agency will continue to work with industry and USDA on issues that arise from this major change in the agricultural industry.

In 2001, EPA finished the Plant Incorporated Protectant (PIP) Rule which clarifies which plant-incorporated protectants are subject to review under FIFRA and FFDCA and clarifies which ones are exempt. This rule reaffirmed that the plant itself is still subject to USDA authorities, while the plant-incorporated protectants are subject to EPA authorities. The new rule ensures that genetically engineered plant-incorporated protectants meet federal safety standards through as rigorous an EPA evaluation as traditional pesticide registrations. In FY 2002 and 2003, additional work needs to be done on the regulatory framework to assure that bioengineered plants are protective of human health and the environment.

Reduced Risk Chemicals and Biopesticides

In FY 2003, EPA will continue to provide incentives to the pesticide industry to decrease risk levels from agricultural pesticides through the expedited regulatory review of reduced risk pesticides, including biopesticides. Reduced risk criteria include pesticides with reduced toxicity, potential to displace other chemicals posing potential human health concerns, reduced exposure to workers, low toxicity to non-target organisms, low potential for groundwater contamination, lower use rates than alternatives, low pest resistance potential, or high compatibility with integrated pest management and efficacy. The Agency is committed to expediting the registration of additional alternative products and in FY 2003, expects to register 13 new reduced risk pesticides.

Reduce Agricultural Use of Potential Carcinogenic or Neurotoxic Pesticides

EPA is moving deliberately to minimize exposure from currently marketed pesticides with the highest potential to cause cancer or neurotoxic effects. In 2003, EPA will continue to address these chemicals and make decisions on how to minimize potential risk resulting from their use. The Agency will continue implementing its cumulative risk policy, using the best available science and incorporating stakeholder concerns. The development and registration of appropriate alternatives to these risky chemicals will remain a priority for the program. The Agency is especially conscious of the potential impacts on minor crop growers and integrated pest management programs and will continue to work with growers and registrants to focus attention on those situations where limited crop protection alternatives exist.

FQPA emphasizes the need to protect children from adverse effects of pesticide exposure. EPA is targeting pesticides used on the foods children commonly eat. Through its regulatory efforts, detections of residues will significantly decrease from pre-FQPA levels (see box.)

Foods that Children Eat

The following 19 foods that children commonly eat were surveyed for organophosphate and carbamate pesticides during 1994 through 1996: apples, apple juice, bananas, broccoli, carrots, celery, grapes, green beans (fresh, canned and frozen), lettuce, milk, oranges, peaches, potatoes, spinach, sweet corn (canned and frozen), sweet peas (canned and frozen), sweet potatoes, tomatoes, and wheat. By the end of 2003, regulatory actions by EPA, including expedited registration of safer pesticides, should result in a 20 percent reduction of occurrence of residues from carcinogenic and neurotoxic pesticides on these foods from 1994-1996 levels.

FY 2003 Change from the FY 2002 President's Budget

EPM

- (-$1,500,000) This decrease reflects non-continuation of one-year Congressional Directive for Safer Pesticide registration.

- (-$602,600, - 1.3 FTE) This decrease reflects return to base levels in registration completion of preliminary analyses of new antimicrobial registrations for products targeting potential bioterrorism threats, funded by the FY 2002 Emergency Supplemental.

- (-$1,195,000, -3.0 FTE) This decrease reflects shifts in FTE and administrative overhead to mirror fee structure changes as the Maintenance fee expires and the new Tolerance Fee is implemented.

Annual Performance Goals and Measures

Decrease Risk from Agricultural Pesticides

In 2003 Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment, through ensuring that all registration action are timely and comply with standards mandated by law

In 2002 Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment, through ensuring that all registration actionare timely and comply with standards mandated by law

In 2002 Provide timely decisions to the pesticide industry on the registration of active ingredients for conventional pesticides.

In 2001 The Agency registered 9 new chemicals, exceeding its target by 2, and 267 new chemicals, underperforming its target by 83

In 2001 The registration of new agricultural pesticides, and reregistration of older agricultural pesticides, were done under the strict health-based standard of FQPA "reasonable certainty of no harm." "Safer" pesticides are those that meet a stricter set of criteria.

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Register safer chemicals and biopesticides	92	105	118	Regist. (Cum)
New Chemicals	53	60	67	Regist. (Cum)
New Uses	1896	2329	2679	Actions (Cum)

Baseline The baseline year is 1996: baseline quantities are 0 1996 is the year FQPA was enacted with its new risk reduction, safety standard "reasonable certainty of no harm" for pesticides used on foods Cumulative totals measured from baseline for safer chemicals, biopesticides, new chemicals, and new uses are displayed because this more clearly shows progress implementing FQPA than would a display of single-year results

Reduce use of highly toxic pesticides

In 2003 Occurence of residues of carcinogenic and cholinesterase inhibiting neurotoxic pesticides on foods eaten by children will have decreased by 20 percent (cumulative) from their average 1994 to 1996 levels

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

In 2001 Data will be available in March 2002.

Performance Measures	FY 2001	FY 2002	FY 2003

	Actual	Enacted	Request	
Reduction of detections on a core set of 19 foods eaten by children relative to detection levels for those foods reported in 1994-1996.		15%	20%	Reduced Detect

Baseline Percent occurrence of residues of FQPA priority pesticides (organophosphates and carbamates) on samples of children's foods in baseline years 94-96. Baseline percent is 33.5% of composite sample of children's foods: apples, apple juice, bananas, broccoli, carrots, celery, grapes, green beans (fresh, canned, frozen), lettuce, milk, oranges, peaches, potatoes, spinach, sweet corn (canned and frozen), sweet peas (canned and frozen), sweet potatoes, tomatoes, and wheat

Reduced Risk Pesticides

In 2003 At least six percent of acre-treatments will use applications of reduced risk pesticides

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

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Percentage of acre treatments with reduced risk pesticides		1%	6%	Acre Treatments

Baseline: Baseline is 1998 acre-treatments: 3.6% of total acreage. Each year's total acre-treatments (all pesticides and reduced risk pesticides), reported by USDA's National Agricultural Statistical Survey (NASS), serve as the basis for computing the percentage of acre-treatments using reduced risk pesticides. Acre-treatments count the total number of pesticide treatments each acre receives each year.

Verification and Validation of Performance Measures

Performance Measures:

- **Number of registrations of reduced risk pesticides.**
- **Percentage of acre treatments with reduced risk pesticides.**
- **Reduction of pesticide detection on foods eaten by children.**

Performance Database: Pesticide Regulatory Action Tracking System (PRATS). PRATS is maintained by the Office of Prevention, Pesticides and Toxic Substances (OPPTS) and is designed to track regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration. Additionally, the Program divisions maintain manual counts of the registrations of reduced risk pesticides. The information is provided to the Office Director's immediate office for consolidation and recordkeeping.

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

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

Data Quality Review: Management reviews the program counts and signs off on the decision document which is then forwarded to the Office Director.

Data Limitations: None. All required data must be submitted for the risk assessments before the pesticide, including a reduced risk pesticide, is registered. If data are not submitted, the pesticide is not registered. A reduced risk pesticide must meet the criteria set forth in PRN 97-3. If it does not meet the criteria, it is not reviewed as a reduced risk, but as a conventional active ingredient. All risk assessments are subject to public and scientific peer review.

New/Improved Data or Systems: The OPPIN (Office of Pesticide Programs Information Network) consolidates various OPP program databases. Phased implementation of the OPPIN began in FY 2001 and will continue through FY 2003.

Coordination with Other Agencies

EPA coordinates with and uses information from a variety of federal, state and international organizations and agencies in our efforts to protect the safety of America's food supply from hazardous or higher risk pesticides.

In May 1991, the U.S. Department of Agriculture (USDA) implemented the Pesticide Data Program (PDP) to collect objective and statistically reliable data on pesticide residues on food commodities. This action was in response to public concern about the effects of pesticides on human health and environmental quality. EPA uses PDP data to improve dietary risk assessment to support the registration of pesticides for minor crop uses.

PDP is critical to implementing the Food Quality Protection Act. The system provides improved data collection of pesticide residues, standardized analytical and reporting methods, and increased sampling of foods most likely consumed by infants and children. PDP sampling, residue, testing and data reporting are coordinated by the Agricultural Marketing Service using cooperative agreements with ten participating states representing all regions of the country. PDP serves as a showcase for Federal-State cooperation on pesticide and food safety issues.

EPA is continuing the development of the National Pesticide Residue Database (NPRD), in coordination with chemists and information management specialists from FDA, USDA, California and Florida. This database will include automated data validation. The system will be integrated with the other EPA databases.

FQPA requires EPA to consult with other government agencies on major decisions. Further, EPA, USDA and FDA work closely together using both a memorandum of understanding and working committees to deal with a variety of issues that affect the involved agencies' missions. For example, these agencies work together on residue testing programs and on enforcement actions that involve pesticide residues on food, and we coordinate our review of antimicrobial pesticides.

While EPA is responsible for making registration and tolerance decisions, the Agency relies on others to carry out some of the enforcement activities. Registration-related requirements under FIFRA are enforced by the states. Tolerances are enforced by the Department of Health and Human Services/Food and Drug Administration for most foods, and by the U.S. Department of Agriculture/Food Safety and Inspection Service for meat, poultry and some egg products.

Internationally, the Agency collaborates with the Intergovernmental Forum on Chemical Safety (IFCS), the CODEX Alimentarius Commission, the North American Commission on Environmental Cooperation (NACEC), the Organization for Economic Cooperation and Development (OECD) and the North American Free Trade Agreement (NAFTA) commission to coordinate policies, harmonize guidelines, share information, correct deficiencies, build other nations' capacity to reduce risk, develop strategies to deal with potentially harmful pesticides and develop greater confidence in the safety of the food supply.

One of the Agency's most valuable partners on pesticide issues is the Pesticide Program Dialogue Committee (PPDC), which brings together a broad cross-section of knowledgeable individuals from organizations representing divergent views to discuss pesticide regulatory, policy and implementation issues. The PPDC consists of members from industry/trade associations, pesticide user and commodity groups, consumer and environmental/public interest groups and others.

The PPDC provides a structured environment for meaningful information exchanges and consensus building discussions, keeping the public involved in decisions that affect them. Dialogue with outside groups is essential if the Agency is to remain responsive to the needs of the affected public, growers and industry organizations.

EPA relies on data from HHS to help assess the risk of pesticides posed to children. Other collaborative efforts that go beyond our reliance on the data they collect include developing and validating methods to analyze domestic and imported food samples for organophosphates, carcinogens, neurotoxins and other chemicals of concern. These joint efforts protect Americans from unhealthful pesticide residue levels.

Statutory Authorities

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Safe Food

Objective: Eliminate Use on Food of Pesticides Not Meeting Standards

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Eliminate Use on Food of Pesticides Not Meeting Standards	**$80,660.5**	**$62,927.5**	**$64,524.2**	**$1,596.7**
Environmental Program & Management	$58,202.0	$50,344.6	$52,478.3	$2,133.7
Rereg. & Exped. Proc. Rev Fund	$12.857.8	$0.0	$0.0	$0 0
Science & Technology	$9,601.6	$12.582.9	$12.045.9	($537.0)
Total Workyears	498.6	443 2	439.0	-4.2

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$279 5	$0.0	$0.0	$0.0
Endocrine Disruptor Screening Program	$3,457.0	$3,388.7	$3,264.1	($124.6)
Facilities Infrastructure and Operations	$6,354.9	$4,575.2	$5,154.0	$578.8
Homeland Security	$0.0	$876.8	$0.0	($876.8)
Legal Services	$372.3	$433.5	$465.5	$32.0
Management Services and Stewardship	$860.0	$931.5	$854.6	($76.9)
Pesticide Reregistration	$27,621.2	$27,170.8	$38,592.4	$11,421.6
Pesticide Residue Tolerance Reassessments	$13,616.1	$13,858.5	$4,607 9	($9,250.6)
Research to Support FQPA	$10,905.5	$11,377.4	$10,821.3	($556 1)
Science Coordination and Policy	$275.8	$315.1	$764 4	$449.3

FY 2003 Request

Pesticides licensing work involves both registration of new chemicals and the review of older chemicals. This objective focuses on the review of older pesticides as well as some of the scientific effort involved in identifying potential endocrine disrupting chemicals. The reregistration and the tolerance reassessment programs look at older pesticides and review their safety in light of the latest science and the new FQPA safety standards. During the Reregistration and the Tolerance Reassessment processes, EPA reviews data and studies submitted by registrants supporting the reregistration or the approved use on food (a tolerance) of a pesticide in order to ensure that pesticides meet the stricter standard mandated by FQPA. During this review, the Agency conducts a risk assessment which forms the basis for the Agency's decisions.

Risk assessments involve a series of sophisticated analyses of the potential health and environmental effects resulting from exposure to a chemical through various means. FQPA brought a number of new analyses into these risk assessments. Draft risk assessments go through both scientific peer review and a public review process. Pesticide companies must submit a wide variety of scientific studies for review before EPA will set a tolerance or reregister a pesticide. The data are designed to identify possible harmful effects the chemical could have on humans (its toxicity), the amount of the chemicals (or breakdown products) likely to remain on or in food, and other possible sources of exposure (e.g., through use in homes or other places).

Complete Active Ingredient and Product Reregistration

Through the Reregistration program, EPA will continue to review pesticides currently on the market to ensure that these also meet the FQPA health standard. Pesticides found not in compliance will be eliminated or otherwise restricted to minimize harmful exposure. The issuance of a Reregistration Eligibility Decision (RED) summarizes the health and environmental effects findings during the reregistration review of the chemical. These findings determine whether the products registered under this chemical are eligible for reregistration. In 2003, the Agency will complete 17 REDs. EPA plans to complete issuing REDs for active ingredients by FY 2006 and for inert ingredients by FY 2008.

Once the reregistration or tolerance reassessment analysis is performed, findings may call for modifications in ways the pesticides are used, in order to reduce risks. Options for risk reduction range from revocation of the tolerance to modifications in use and re-entry intervals or application rates. For example, the pesticide could be applied in lower quantities, or less frequently, or at a greater distance from water bodies.

The FY 2003 request includes additional funds for reregistration of antimicrobials. EPA has made great strides in addressing FQPA requirements and incorporating them into its core programs. The Agency has met much shorter review periods for antimicrobials and virtually eliminated the backlog in this area, however, success in these and other areas, has meant some trade-offs were necessary. These new resources will support the antimicrobial tolerance reassessments required to

meet the FQPA deadline for completing tolerance reassessments by August 2006 and for maintaining the established goal for reregistration.

EPA's authority to collect Reregistration Maintenance Fees expires at the end of FY 2002 under the 2002 appropriations bill for the Agency. The 2003 request substitutes appropriated funds for fees to fund the reregistration program. The appropriated dollars for this were reprogrammed from the tolerance assessment program which will be funded by fee revenue starting in March 2003.

Registration Review

FQPA requires that EPA establish a process for periodic review of pesticide registrations with a goal of completing this process every 15 years. The registrations of all pesticides will be continuously updated with respect to current scientific data, risk assessment methodologies, program policies, and effective risk reduction measures, ensuring that they meet the most current health standards. In 2003, EPA will complete the final rule, setting up the new program. The regulation will define and outline the program. As the reregistration program draws to a close, the new registration review program will continue to protect human health and the environment, using the most current scientific standards.

Reassessment of Existing Pesticide Residue Tolerances on Food

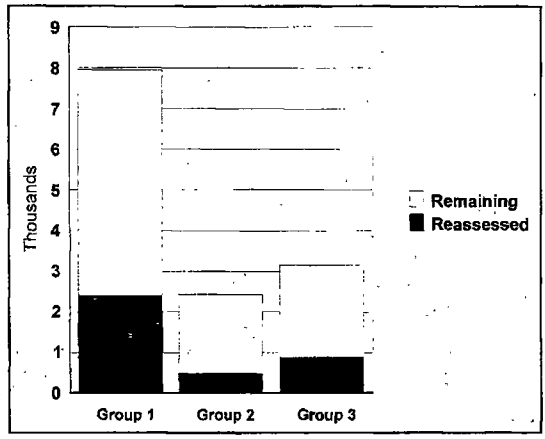
A tolerance is the maximum legal amount of a pesticide residue permissible on food. FQPA requires that EPA reassess within ten years the more than 9,721 pesticide tolerances existing in 1996. The first statutory deadline was to complete reassessment of 33 percent of the existing tolerances by August 1999. EPA surpassed this goal, reassessing approximately 39 percent of the tolerances, most of them among the highest priority group. The next deadline, which the Agency expect to meet, is to reassess 66 percent of these tolerances by August 2002. In FY 2003, the Agency will continue its reassessment of these tolerances completing approximately a cumulative 70 percent.

As mandated by FQPA, the Agency continues to ensure that sound science is applied consistently in our pesticide reviews and that this process includes stakeholder and scientific community input. The Agency has worked extensively with stakeholders through the Pesticide Program Dialogue Committee (PPDC) and the Committee to Advise on Reassessment and Transition (CARAT) to ensure transparency in decision making and a fuller understanding of the implications for growers, producers and the public. EPA will continue to encourage transition to safer pesticides, and to coordinate closely with USDA, industry and commodity groups in finding alternatives and sharing information. By FY 2003, the Agency will have completed review of a group of higher risk pesticides, the organophosphates, which, because of their wide use, heavily affect the farming community. To address the issues around organophosphate replacement, the Agency and USDA collaborated in development and implementation of a review process which greatly expanded public participation. This process will continue to be improved and expanded, as necessary as we continue our review of other groups of high risk, older pesticides.

The risk assessment is the basis for decision-making on reregistration and tolerance reassessment and includes consideration of the amounts and types of food people eat and how widely the pesticide is used (that is, how much of the crop is actually treated with the pesticide), as well as chemistry, toxicity and exposure information. EPA obtains data from a wide variety of sources including USDA surveys on what foods people eat and the quantity they eat, FDA residue monitoring, and U.S. Geological Survey information on pesticide levels in ground, surface and drinking water The risk assessment and adjunct analyses determine the outcomes for the tolerances on food. FQPA requires new assessment analyses, looking at both aggregate risk and cumulative exposures to pesticides with a common mechanism of toxicity. The science and policies behind these assessments is complex and the standards developed will impact many pesticides on the market. For this reason, EPA has sought the advice and peer review of the scientific community as well as stakeholders. This intensive effort lead to a lag in finalizing some tolerance reassessments in 2000 and 2001. With the final policies in place in 2002, the Agency will complete processing of the reassessments to meet its FQPA deadlines, and in 2003 will commence the last phase of the FQPA tolerance reassessments requirements.

Protecting children's health is of central concern under FQPA, which requires that EPA give priority to the review tolerances or exemptions that appear to pose the greatest risk to public health. As a result, EPA divided all pesticide chemicals into three priority groups, published in the Federal Register in the first year of the FQPA provisions.

There are 9,721 tolerances that must be reassessed. Tolerances for the highest risk pesticides are in Priority Group 1, which includes organophosphates, carbamates, and probable carcinogens, among other high risk chemicals, and totals 5,546 tolerances. Group 2 includes some carcinogens and other tolerances, and Group 3 includes the remaining pre-FQPA and post-1984 pesticides. Some tolerances in all groups have been reassessed as part of the work already underway in the reregistration program. Status of reassessments is as follows:



Status of Tolerance Reassessment by Priority Group (as of 12/31/01)

- Group 1: 2,428 reassessments out of 5,546 (56 percent remaining and 44 percent reassessed)
- Group 2: 506 reassessments out of 1,928 (74 percent remaining and 26 percent reassessed)
- Group 3: 3,832 reassessments out of 2,247 (65 percent remaining and 35 percent reassessed)

Endocrine Disruptors

Fish and wildlife in some areas of the world have been affected by chemicals that interfere with the endocrine system resulting in abnormal development, low fertility and greater susceptibility to disease. The link to human disease is less clear, particularly at low ambient environmental levels. Effects have been seen after high exposures. Since the human endocrine system helps guide development, growth, reproduction and behavior, possible endocrine disruption is an important issue, especially for children. The concern that chemicals may affect the endocrine system of humans led to the inclusion of a provision in the Food Quality Protection Act (FQPA) mandating that EPA test pesticides for endocrine disrupting effects on human health. Endocrine Disrupting Chemicals are also addressed in the Safe Drinking Water Act Amendments of 1996.

Work on pesticide and chemical endocrine disruptors crosses two EPA goals, relating to both pesticides and all other toxic chemicals (Goals 3 and 4). For details concerning the Endocrine Disruptor Program and its screening activities, consult Goal 4, Objective 3. For Goal 3, in 2003, the Agency will continue its efforts to develop alternative, non-animal methods that can be validated and incorporated into its programs.

Research

The Food Quality Protection Act of 1996 (FQPA) identifies science needs consistent with characterizing and evaluating aggregate and cumulative exposures to pesticides and the effects associated with these relevant exposures. The FQPA also identifies the need to conduct research to ensure the safety of children. Aggregate exposure is defined as the exposure to a single pesticide through all routes and pathways, while cumulative exposure is defined as the exposure to multiple pesticides through all routes and pathways. Research in this objective focuses on the exposures and effects associated with children and other susceptible and/or sensitive subpopulations. The FQPA research program is designed to provide the scientific foundation for assessing aggregate and cumulative risk and susceptibilities of sensitive subpopulations (including children) from exposure to pesticides in order to reduce uncertainty in risk assessments conducted under FQPA.

Major uncertainties exist related to the degree to which current risk assessment practices provide adequate protection to those segments of the population (with a focus on protecting children) who are more sensitive than the average individual. These uncertainties elicit questions about the health endpoints of greatest concern in children, age-related differences in exposure, age-related physiological differences that might affect internal exposures and health outcomes, and whether current risk assessments adequately protect children and other sensitive subpopulations from unreasonable risk. Research will address questions about exposures experienced by children and other susceptible subpopulations and whether they produce quantitatively or qualitatively different effects than those experienced by adults.

Other uncertainties relate to our ability to assess risk from aggregate exposure to single chemicals and to cumulative exposures to multiple pesticides and other chemicals with like mechanisms of action. EPA research will address questions about the level of aggregate and cumulative exposures, the effects resulting from multiple, short-term exposures to various sources and the characteristics of toxic pesticide mixtures in the environment that are important for assessing risks to humans.

In FY 2003, health effects research will yield new and improved test methods to evaluate the effects of environmental exposure to pesticides and other chemicals in sensitive subpopulations. Research will also develop methods to evaluate the effects of cumulative exposures to pesticides and toxic chemicals, including both long-term exposures and multiple acute exposures. Specifically, this work will determine if exposure to multiple pesticides with a similar mode of action produce non-additive interactions, and if effects/interactions vary between adult and juvenile animals. The development of models (e.g, physiologically-based pharmacokinetic, biologically-based dose-response, and structure-activity relationship models) to extrapolate findings and predict effects is also included in this effort.

Exposure research will address major exposure data gaps, distributions of key exposure factors (especially across age groups for children and other susceptible subpopulations), and uncertainties associated with the exposure assessment requirements for FQPA. These efforts will produce: 1) tools and methods for conducting exposure research; 2) high quality exposure data that

identifies the key factors associated with aggregate and cumulative pesticide exposures and characterizes the distributions of pesticide exposures for children, other susceptibles, and the general population; and 3) a toolbox of source-to-dose probabilistic exposure models for extending the exposure research results, integrating exposure research with effects research, and identifying new science needs to support the FQPA mandates. The Agency will use these results to better characterize, assess, and manage aggregate and cumulative exposures to pesticides and toxics.

EPA will initiate a major population-based field study in FY 2003 that will focus on young children's aggregate exposure to pesticides in homes, day care centers, and schools (this research will be leveraged with corresponding research being planned and conducted within the core human health research program). This study will be completed in FY 2004 with delivery of major products in FY 2005. Study results will be used to: 1) evaluate and refine a protocol for measuring aggregate exposure for children of different age and developmental groups; 2) verify those pathways and activities that represent the highest exposures for children; 3) generate high quality distributional data on children's exposure concentrations, estimated exposures, and exposure factors; and 4) develop a measurement database for model evaluations, model improvement, hypothesis generation, and risk assessments.

Additionally, in FY 2003 the Agency will continue its efforts to address uncertainties in the areas of intermittent exposure and cumulative risk. EPA will develop data, methods, and models for characterizing and combining exposures and assessing exposure-dose-response relationships for pesticides with different exposure patterns (inclusive of temporal, spatial, and multipathway considerations). The emphasis of this research will be on developing a foundation for cumulative risk assessment methodology. EPA will also use the results from the exposure and effects research programs to develop improved risk management strategies and tools for reducing potential health risks to children and other highly exposed populations.

To address some of the complex uncertainties in the area of cumulative risk, the Agency will continue efforts to develop a systematic approach for determining the cumulative risk for a given set of exposure conditions. This approach, starting with less complex paradigms (e.g., risk from aggregate exposure to a single chemical, or a class with a postulated common mode of action, which is present in multiple pathways), will build towards the more complex, including consideration of different temporal dimensions of exposure. In each case, work will employ an integrated model for estimating cumulative risk by identifying and defining the relationship between the determinants of exposure, source(s), pathway(s), and exposure-to-dose.

Understanding these relationships will also better focus and guide risk management decisions and allow for more accurate prediction if determinants change (e.g., addition or reduction in a source in a given setting). This approach will provide the opportunity to assess the validity of current risk assessment methods and models to account for multiple sources/exposures, stressors, and toxicities.

Risk assessment research, another facet of the FQPA research program, will continue to focus on developing methods for combining exposures from different pathways, assessing exposure-dose-response relationships for pesticides and other compounds with common modes of action, and

reducing uncertainties in risk assessment for children. Analyses using data from available sources (e.g., the National Human Exposure Assessment Survey - NHEXAS and the National Health and Nutrition Examination Survey - NHANES) will be conducted focusing on aggregate exposure and risk to multiple chemicals from multiple pathways, particularly for children.

The Agency will continue to compare pesticide exposures across age groups, identify factors leading to higher exposures, and analyze data to improve the evaluation of exposure factors for pesticide risk assessment. Results will support risk assessments under FQPA and development of Agency guidelines for cumulative risk assessment through the EPA Risk Assessment Forum.

The risk management research program, the final component in the risk paradigm structure, will evaluate characteristics of commonly used pesticides or pesticides of particular concern to determine which chemicals should be targeted for development of risk management tools. Risk management tools will be identified that have the potential to reduce exposure from the identified chemicals and research projects specific to the chosen chemicals will begin.

In summary, the FQPA research program provides direct support to EPA's Office of Prevention, Pesticides, and Toxic Substances (OPPTS) through the development of specific methods, data, tools, and protocols that will be used to develop new or revised test guidelines under the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended by FQPA. These test guidelines provide direction to the manufacturers of pesticides and industrial chemicals in collecting the data required for registering pesticides and gaining approval to manufacture chemicals.

FY 2003 Change from the FY 2002 President's Budget

EPM

- (+$2,000,000) This increase will be directed to increased reregistration of antimicrobial pesticides and associated tolerance reassessments. Reregistration of antimicrobials is critical to meeting our final statutory deadlines for tolerance reassessment.

- (+$9,000,000, 73.8 FTE) Appropriated funds are shifted from the tolerance program, to the reregistration program. The reregistration program will no longer be funded by the Maintenance fee, which expires at the end of FY 2002.

- (-$9,178,000 -73.8 FTE) Appropriated funds are being shifted from tolerance reassessment program and the reregistration program, as described above. The tolerance reassessment program will be funded through the new tolerance fee rule beginning in March 2003.

- (-$862,000, -1.3 FTE) This decrease reflects return to base levels in reregistration after completion of preliminary analysis for the reregistration of antimicrobials which may be effective against bioterrorism threats including anthrax. The effort was funded by the Emergency Supplemental.

•• (+$760,700) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Research

S&T

•• (-$765,000) This reduction eliminates funding for the Congressionally-directed research.

•• (+$112,900, 1.0 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program office on major rules.

Annual Performance Goals and Measures

Reassess Pesticide Tolerances

In 2003 Assure that pesticides active ingredients registered prior to 1984 and the products that contain them are reviewed to assure adequate protection forhuman health and the environment Also consider the unique exposure scenarios such as subsistence lifestyles of Native Americans in regulatory decisions

In 2003 By the end of 2003 EPA will reassess a cumulative 68% of the 9,721 pesticide tolerances required to be reassessed over ten years and complete reassessment of a cumualtive 75% of tolerances of special concern in protecting the health of children

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

In 2002 By the end of 2002 EPA will reassess a cumulative 66% of the 9,721 pesticide tolerances required to be reassessed over ten years This includes 67% of the 893 tolerances having the greatest potential impact on dietary risks to children

In 2001 EPA reassessed 40% of tolerances requiring reassessment under FQPA and issued a cumulative 72% of total REDs required, achieving both targets

In 2001 EPA reregistered 856 products, exceeding its target by 14%

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Tolerance Reassessment	40%	66%	68%	Tolerances(Cu
REDs	71.6%	76 4%	83%	Decisions (Cur
Product Reregistration	856	750	750	Actions
Tolerance reassessments for top 20 foods eaten by children	43 5%	67%	75%	Tolerances(Cu

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

Verification and Validation of Performance Measures

Performance Measures:

- **Number of tolerance reassessments**
- **Number of REDs**
- **Number of Product Reregistrations**

Performance Database: Tolerance Reassessment Tracking System (TORTS) is an in-house (Office of Pesticide Programs-wide) system containing records on all 9,721 tolerances subject to reassessment. It contains numbers of total tolerances reassessed; breakout by Fiscal Year, source, & priority group; outcomes of reassessments (number of tolerance levels raised, lowered, revoked, remaining same). It also provides counts of tolerances reassessed for organophosphates, carbamates, organochlorines, carcinogens and high hazard inerts, children's foods, and minor uses.

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

QA/QC Procedures: OPP Management verifies/signs decision to count tolerance as reassessed or not, as a result of the Reregistration Eligibility Decision or decision to approve registration. Additionally, the Program Divisions maintain counts of the tolerances reassessed. The information is provided to the Office Director's immediate office for consolidation and record-keeping.

Data Quality Review: Management reviews the program output counts. Tolerance counting rules are reviewed for consistency across the programs. Decisions are made by management as to whether the tolerance requires cumulative risk assessment or individual risk assessment. This decision is made based on whether the tolerance belongs to a group of chemicals which have a common mode of toxicity.

Data Limitations: Because the measure is a numeric count, there are no data limitations. Data needed for registration or reregistration/tolerance reassessment are provided by the pesticide registrant. If the data required for the risk assessment is not provided with the original package, then the information is requested from the registrant. The pesticide is not registered or reregistered until the required data are submitted. Should the registrant choose not to support a reregistration and associated tolerance reassessments, the Agency may cancel the pesticide involved.

New / Improved Data or Systems: The OPPIN (Office of Pesticide Programs Information Network) database consolidates various OPP program databases. Phased implementation of the OPPIN began in FY 2001 and will continue through FY 2003. **Number of registrations of reduced risk pesticides.**

Performance Database: Pesticide Regulatory Action Tracking System (PRATS). PRATS is maintained by the Office of Prevention, Pesticides and Toxic Substances (OPPTS) and is designed to track regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration. Additionally, the Program Divisions maintain manual counts of the registrations of reduced risk pesticides. The information is provided to the Office Director's immediate office for consolidation and recordkeeping.

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

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

Data Quality Review: Management reviews the program counts and signs off on the decision document which is then forwarded to the Office Director.

Data Limitations: None. All required data must be submitted for our risk assessments before the pesticide is registered. This applies to reduced risk candidates, as well. If data are not submitted, the pesticide is not registered. A reduced risk pesticide must meet the criteria set forth in PRN 97-3. If it does not meet the criteria, it is not reviewed as a reduced risk, but as a conventional active ingredient. All risk assessments are subject to public and scientific peer review.

New/Improved Data or Systems: The OPPIN (Office of Pesticide Programs Information Network) consolidates various OPP program databases. Phased implementation of the OPPIN began in FY 2001 and will continue through FY 2003.

Coordination with Other Agencies

USDA supplies EPA with important data on food consumption, pesticide use and pesticide residues on foods. The data are used in making reregistration and tolerance setting decisions. USDA's Pesticide Data Program (PDP) collects pesticide residue data through the cooperation of 10 participating states. FDA monitors food imports and also conducts the Total Diet Study, monitoring pesticide residues present in prepared food. The states provide support services in collection and testing of commodities for pesticides using uniform national standard operating procedures.

EPA also actively solicits advice and comments on the implementation of pesticide programs from key stakeholders and the public. EPA works with other government officials, regulated industry, agricultural and other user groups, food processors, academia, environmental and public interest groups, the international community and the media to reach all interested parties.

In implementing FQPA, EPA has consulted with key constituencies on a wide range of critical issues. Standing committees that are providing, or have provided advice to EPA include:

- The Endocrine Disruptors Screening and Testing Advisory Committee (EDSTAC)--established to give advice and counsel on developing a strategy to screen and test endocrine disrupting chemicals and pesticides--included representatives of industry, state and federal government, public health, environmental, labor organizations, small businesses and academia. In 2001, a new Endocrine Disruptor Methods Validation Subcommittee was established under the National Advisory Committee for Environmental Policy and Technology (NACEPT) to provide guidance regarding the design, conduct and interpretation of studies to validate the endocrine disruptor screening and testing program. The Subcommittee members represent a wide range of stakeholders drawn from the scientific community as well as federal and non-profit organizations.

- The Pesticide Program Dialogue Committee (PPDC)--a previously chartered group designed to assist EPA in making decisions related to pesticide regulation--consists of a diverse group of representatives with a broad range of interests. The PPDC will provide EPA with continuing advice on implementation of FQPA.

- EPA's FIFRA Science Advisory Panel (SAP) and Science Advisory Board (SAB) provide independent scientific peer review.

- The State FIFRA Issues Research and Evaluation Group (SFIREG) allows state input and comments from the public.

- The Consumer Labeling Initiative (CLI)--established to learn how to make important health, safe use and environmental information on household product labels easier to find, read, understand and use–includes members from EPA, industry, other federal and state agencies and private groups.

- Committee to Advise on Reassessment and Transition (CARAT). The purpose of CARAT is to provide advice and counsel to the Administrator of EPA and the Secretary of Agriculture regarding strategic approaches for pest management planning and tolerance reassessment for pesticides as required by the Food Quality Protection Act of 1996. CARAT is preceded by the Tolerance Reassessment Advisory Committee.

Research

EPA, in collaboration with the National Institute for Environmental Health Sciences (NIEHS), has established Centers for Children's Environmental Health and Disease Prevention to define the environmental influences on asthma and other respiratory diseases, childhood learning,

and growth development. NIEHS, through the National Toxicology Program (NTP), develops new technologies for high throughput toxicity testing, and is responsible for one-third of all toxicity testing performed worldwide.

The Centers for Disease Control and Prevention (CDC), through the National Center for Environmental Health (NCEH), studies health problems associated with human exposure to lead, radiation, air pollution, and other toxics, as well as to hazards resulting from technologic or natural disasters. These are mainly surveillance and epidemiology studies and NCEH is particularly interested in studies that benefit children, the elderly, and persons with disabilities. The NCEH laboratory supports many of EPA's studies and is the analytical laboratory for samples collected in the EPA-sponsored pesticide study in the National Health and Nutrition Examination Survey - NHANES-4, being conducted by the National Center for Health Statistics (NCHS) of CDC. NHANES-4 is a survey of the national population and includes data on potentially sensitive subpopulations such as children and the elderly. EPA is participating in this survey with NCHS to collect information on children's exposure to pesticides and other environmental contaminants. In FY 2003, EPA will collaborate with NCHS to produce an analysis of data collected on pesticides in NHANES-4.

The National Institute of Child Health and Human Development (NICHD) is the lead agency for conducting the National Children's Study (NCS) of environmental influences on children's health and development. EPA is part of a consortium of Federal agencies that are planning, developing and implementing the NCS.

Statutory Authorities:

Federal Fungicide, Insecticide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Toxic Substances Control Act (TSCA)

Research

Food Quality Protection Act of 1996 (FQPA)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Federal Food, Drug, and Cosmetic Act (FFDCA)

Environmental Protection Agency
2003 Annual Performance Plan and Congressional Justification
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Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

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

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems	**$305,072.6**	**$321,649.7**	**$326,651.9**	**$5,002.2**
Reduce Public and Ecosystem Risk from Pesticides	$54,262.3	$56,026.3	$55,409.8	($616.5)
Reduce Risks from Lead and Other Toxic Chemicals	$33,927.9	$36,423.5	$36,355.9	($67.6)
Manage New Chemical Introduction and Screen Existing Chemicals for Risk	$69,315.0	$75,337.8	$77,538.2	$2,200.4
Ensure Healthier Indoor Air.	$39,190.4	$39,670.1	$40,322.7	$652.6
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	$41,723.8	$48,755.4	$46,115.9	($2,639.5)
Assess Conditions in Indian Country	$66,653.2	$65,436.6	$70,909.4	$5,472.8
Total Workyears	1,131.2	1,208.2	1,193.9	-14.3

Background and Context

The underlying principle of the activities in this goal is the application of pollution prevention. Preventing pollution before it may harm the environment or public is cheaper and smarter than costly cleanup and remediation. EPA uses a number of approaches to protect public health and the nation's ecosystems from the risks of exposure to pesticides and/or toxic chemicals.

While EPA continues to implement "the reasonable certainty of no harm" standard mandated by the FQPA in its regulatory decisions, it also works with pesticide users on adopting less toxic methods of pest management that reduce or eliminate toxic pesticides entering indoor and outdoor environments.

Regarding industrial emissions of toxic chemicals, in 1999 Toxics Release Inventory (TRI) facilities reported a total of 10.2 billion pounds of pollutants released, treated or combusted for energy. Reducing waste, and reducing the toxic chemicals that are used in industrial processing, protects the environment and also improves efficiency, thereby lowering costs for industry.

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

In Goal 4, the Agency targets certain chemicals of high risk as well as the full range of pollutants addressed by the pollution prevention program. Many chemicals are particularly toxic to children. For instance, at high levels, lead damages the brain and nervous system and can result in behavioral and learning problems in children. Despite a dramatic reduction in lead exposure among young children over the last twenty years, there were still approximately 900,000 children in the U.S. with elevated blood lead levels in the early 1990's. Evidence from recent State surveys suggests that EPA and other government programs made important progress in the mid- to late 1990's in further combating lead poisoning in children under the age of 6 years (though updated national estimates are still in development). On other fronts, exposure to asbestos, polychlorinated biphenyls (PCBs) and some pesticides in our buildings and in the environment poses risks to humans as well as wildlife. Pesticides and chemicals that may act as endocrine disruptors at ambient levels is an area of increased concern for human health and the environment. For other common chemicals, risks may not be known. The screening and testing of chemicals about to enter the market, combined with the review of the most common chemicals already in use through the Chemical Right-to-Know Program, fills critical gaps in our knowledge about the effects of chemicals on human health and the environment.

Means and Strategy

The diversity and sensitivity of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting the public from the threats posed by pesticides, toxic chemicals and other pollutants. The underlying principle of the activities in this goal is the application of pollution prevention practices, which can be cheaper and smarter than cleanup and remediation, as evidenced by the high cost of Superfund, Resource Conservation and Recovery Act (RCRA), and Polychlorinated Biphenyls (PCB) cleanups. Pollution Prevention (P2) involves changing the behavior of those that cause the pollution and fostering the wider use of preventive practices as a means to achieve effective, sustainable results.

Under this Goal, EPA ensures that pesticides and their application methods do not present unreasonable risks to human health, the environment, and ecosystems. In addition to the array of

risk-management measures specified in the registration authorities under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for individual pesticide ingredients, EPA has specific programs to foster worker and pesticide-user safety, ground-water protection, and the safe use of pesticides and other pest control methods. These programs work to ensure the comprehensive protection of the environment and wildlife, endangered species in particular, and to reduce the contribution of pesticides to ecological threats such as pollutant loading in select geographic areas. EPA is also addressing emerging threats such as endocrine disruptors by developing and implementing new screening technologies to assess a chemical's impact on hormonal activity.

Within the pesticide program, EPA pursues a variety of field activities at the regional, state, Tribal and local levels, including the promotion of pesticide environmental stewardship and Integrated Pest Management (IPM). States and Tribes are vital partners in our work to implement FQPA. Newer lab equipment will assist states enforcement of new FQPA standards. The voluntary partnerships and outreach programs that help farmers transition away from the riskier products are often catalyzed by state participation. These programs, combined with the availability of newer and safer pesticides, are having a real impact. In 2003 we expect at least 6 percent of acre-treatments will use applications of reduced-risk pesticides. We are seeing a reduction in wildlife impacts from pesticides as well, and in 2003 we project an additional 10 percent reduction in reported incidents of wildlife mortalities, from the 1995 level (for a cumulative 20 percent). That means fewer bird casualties, and fewer fish kills. The accumulation of these improvements will mean safer food, improved biodiversity, and a cleaner environment.

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

Preventing pollution through partnerships is also central to EPA's Chemical Right-to-Know Program (ChemRTK) which has already started providing the public with information on the basic health and environmental effects of the 2,800 highest production volume (HPV) chemicals in the United States (chemicals manufactured in or imported into the U.S. in quantities of at least 1 million pounds). Most residents come into daily contact with many of these chemicals, yet relatively little is known about their potential impacts. Getting basic hazard testing information on large volume chemicals is the focus of the "HPV Challenge Program," a voluntary program challenging industry to develop chemical hazard data that are critical to enable EPA, State, Tribes, and the public to screen chemicals already in commerce for any risks they may be posing.

Children's health remains a strong focus of the indoor environments program. Efforts in FY 2003 will target reductions in the presence of indoor triggers of asthma, such as

environmental tobacco smoke and biological contaminants, by continuing to educate the public about the disease and about the steps they can take to reduce the severity and frequency of asthma attacks. Voluntary work will be undertaken by schools to empower their students to manage their asthma symptoms better, by school personnel to improve the indoor environments of their schools, and by health care personnel to incorporate education about managing environmental asthma triggers into asthma treatment plans for their patients. EPA will continue to work toward bottom line results to reduce risk and improve indoor air quality through implementation of the Indoor Air Quality (IAQ) "Tools for Schools" kit and schools-based asthma education programs such as the "Open Airways" program in elementary schools. EPA will also continue work in the radon area primarily through the State Indoor Radon Grant Program where EPA provides assistance to the states for the development and implementation of programs to assess and mitigate radon to enhance the effectiveness of state and local activities for radon risk management and reduction.

Also central to the Agency's work under this goal in FY 2003 will be continued attention to reducing potential risk from persistent, bioaccumulative and highly toxic chemicals (PBTs) and from chemicals that have endocrine disruption effects. PBT chemicals are of particular concern not only because they are toxic but also because they may remain in the environment for a long period of time, are not readily destroyed, and may build up or accumulate to high concentrations in plant or animal tissue. In cases involving mercury and PCBs, they may accumulate in human tissue. EPA is also taking the initial steps to address the potential threat of endocrine disrupting chemicals on the health of humans and wildlife. Work focuses on developing and validating new chemical screens and tests to isolate those chemicals and characterize the threat.

EPA programs under this Goal have many indirect effects that significantly augment the stream of benefits they provide. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,800 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals, like PCBs, from entering the marketplace, but it has also contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these chemicals have on human health and the environment. This awareness has led industry to produce safer "greener" alternative chemicals and pesticides. Under the Pollution Prevention Framework, the Agency recently started providing industry training in the use of the same tools that EPA uses to assess new chemicals, enabling companies to make smarter choices at earlier stages in their design process, reducing government costs, and hastening the entry of safer new products into the marketplace.

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

technical solutions to prevent pollution. In addition, the Green Engineering Program works with the American Society of Engineering Education (ASEE) to incorporate GE approaches into engineering curricula.

In several cases, achieving the strategic objectives under this goal is a shared responsibility with other federal, state and Tribal partners. For example, EPA's role in reducing the levels of childrens lead exposure involves promotion of federal-state-Tribe partnerships to decrease the number of specific sources of lead to children, primarily from addressing lead-based paint hazards. These partnerships emphasize development of a professional infrastructure to identify, manage and abate lead-based paint hazards, as well as public education and empowerment strategies, which fit into companion Federal efforts with Department of Health and Human Services (HHS), Department of Defense (DOD), Department of Energy (DOE), Department of Justice (DOJ), Centers for Disease Control (CDC), and Department of Housing and Urban Development (HUD). These combined efforts help to monitor lead levels in the environment, with the intent of virtually eliminating lead poisoning in children.

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

In FY 2003, EPA's waste management program will increase consumer and individual awareness of environmental issues by focusing on an environmental retail theme. This will emphasize a retail outreach approach targeted at consumers and households. EPA's environmental retail theme promotes better environmental decision-making, greater interest in the environment, and environmental stewardship on the manufacturing level.

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

Research

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

Strategic Objectives and FY 2003 Annual Performance Goals

Reduce Public and Ecosystem Risk from Pesticides

- Reduce by 20 percent from 1995 levels the number of incidents involving mortalities to terrestrial and aquatic wildlife caused by pesticides.

Reduce Risks from Lead and Other Toxic Chemicals

- Reduce lead exposure in housing units and in the deleading of bridges and structures.

Manage New Chemical Introduction and Screen Existing Chemicals for Risk

- Of the approx. 1,800 application new chemical and microorganisms submitted by industry, ensure those marketed are safe for humans and the environment. Increase proportion of commercial chemical that have undergone PMN review to signify they are properly managed and may be potential green alternative to existing chemical.

- Provide information and analytical tools to the public for assessing the risks posed by toxic chemicals.

Ensure Healthier Indoor Air

- 834,400 additional people will be living in healthier residential indoor environments.

- 1,050,000 students, faculty and staff will experience improved indoor air quality in their schools.

Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals

- The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2003, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2002. This data will be reported in 2005.

- Divert an additional 1% (for a cumulative total of 32% or 74 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day.

Assess Conditions in Indian Country

- In 2003, AIEO will evaluate non-Federal sources of environmental data pertaining to conditions in Indian Country to enrich the Tribal Baseline Assessment Project.

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 cost effective remediation strategies. Reducing pollution at the source will be carried out using a multi-media approach in the following environmental problem areas:

Reduce Public and Ecosystem Risks from Pesticides

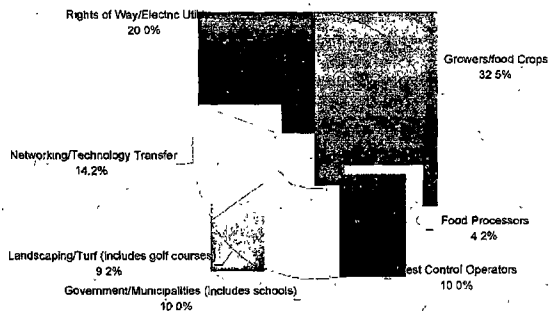
Reducing risk from exposure to pesticides requires a multi-faceted approach. Beyond being exposed through the food we eat, the general public, applicators, and farm workers may be exposed to pesticides through direct handling, groundwater contamination or aerial spray. One intent of the Food Quality Protection Act (FQPA) is to protect the public by shifting the nation toward reduced risk pesticides and safer pesticide use. Appropriate transition strategies to reduced risk pesticides are important to the nation to avoid disruption of food supply or sudden changes in the market that could result from abruptly terminating the use of a pesticide before well-targeted reduced risk equivalents can be identified and made available. In 2003, the initiative will continue efforts to reach more farmers, and grower groups, encourage them to adopt safer pesticides, use environmental stewardship and integrated pest management practices, and adopt a "whole farm" approach to environmental protection. Through these partnership programs the Agency has become more aware of the multiple pressures on our nation's agricultural industry and the interaction of the various environmental requirements that affect it.

Additionally, through the Certification and Training (C&T) and Worker Protection (WP) programs, EPA will continue training and educating farm workers and employers on worker safety practices and the dangers of pesticides. EPA will continue to protect the Nation's ecosystems and reduce adverse impacts to endangered species through various regulatory and voluntary programs, including the Pesticide Environmental Stewardship Program (PESP) 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 issues of safe pesticide use and pesticide exposure. These programs emphasize safeguarding workers and other pesticide users from occupational exposure to pesticides by providing training for workers, employers, and pesticide applicators and handlers. Training and certification of applicators of restricted use pesticides further ensures that workers and other vulnerable groups are protected from undue pesticide exposure and risk. Recertification requirements keep their knowledge current with label changes, application improvements, availability of new pesticides and other pesticide related issues. The Endangered Species program will enlist the support of the agricultural community and other interested groups to protect wildlife and critical habitats from pesticides. This voluntary program is carried out through communications and outreach efforts and in coordination with other federal agencies. The Pesticide Environmental Stewardship Program (PESP) and Integrated Pest Management (IPM) play pivotal roles in moving the nation to the use of safe pest control methods, including reduced risk pesticides. These closely related programs

promote risk reduction through collaborative efforts with stakeholders to use safer alternatives to traditional chemical methods of pest control.

Pesticide Environmental Stewardship Members



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

Reduce Risks from Lead and Other Toxic Chemicals

EPA is part of the Federal effort to address lead poisoning and elevated blood levels in children by assisting in, and in some cases guiding, federal activities aimed at reducing the exposure of children in homes with lead-based paint. During FY 2003, EPA will continue implementing its comprehensive program to reduce the incidence of lead poisoning and elevated blood levels in children nationwide.

In 2003, EPA will continue the Lead Based Paint Training & Certification Program in all fifty states through EPA authorized state, territorial or Tribal programs or, in states and territories without EPA authorization, through direct implementation by the Agency. By the end of 2003, we expect to have provided the nation with more than 6,000 individuals and firms formally certified in properly abating lead paint hazards. In the lead regulatory program, EPA will finalize one major rule on training and certification for renovation and remodeling activities. We will also be working to finalize a major rule setting standard for deleading of buildings and structures, which will be proposed late in 2002.

EPA will continue to implement the new Lead Hazards Standards Rule (finalized in 2001), the Lead Renovation Information Rule and the Real Estate Notification & Disclosure Rule. EPA is working with other Federal Agencies including Department of Health and Human

Serviced (HHS), Department of Housing and Urban Development (HUD), Department of Defense (DOD), Department of Energy (DOE), Consumer Product Safety Commission (CPSC), and Department of Justice (DOJ) on implementing a Federal Strategy to virtually eliminate lead poisoning.

For other 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 as well as sensitive sub-populations. In FY 2003, EPA's PCB control efforts will encourage phase-out of PCB electrical equipment, ensuring proper waste disposal methods and capacity, and fostering PCB site cleanups. 660,000,000 Kg of bulk PCB-contaminate waste will be safely disposed of in 2003. The Agency will continue assessing dioxin risks, including identifying and quantifying the link between dioxin sources and the general population exposure, and development of a plans to develop an dioxin strategy to respond to the latest science and address dioxin risk management in a more comprehensive cross-media approach.

Manage New Chemical Introduction and Screen Existing Chemicals for Risk

Under TSCA, EPA identifies and controls unreasonable risks associated with chemicals. The chemical right-to-know program addresses a critical gap in the nation's knowledge about the health and environmental hazards of high production volume chemicals (HPVs). EPA is working with industry to put information about those chemicals into the hands of the public so they can make better and more informed consumer choices.

EPA's Chemical Right-to-Know Initiative (ChemRTK) has already started providing the public with information on the basic health and environmental effects of the 2,800 highest production volume (HPV) chemicals in the United States (chemicals manufactured in or imported into the U.S. in quantities of at least 1 million pounds). Industry response to the HPV Challenge has been overwhelming: more than 460 companies have voluntarily committed themselves to providing EPA with test data for 2,155 chemicals and 187 chemical categories of the 2,800 HPV chemicals. EPA has already commenced its review and public posting of these company submissions. By the end of FY 2002, the Agency expects to have posted test data covering 10% of the HPV chemicals. EPA is requesting additional resources for the ChemRTK program in FY 2003 to bolster our ability to keep pace with the pending increase of industry data submissions. These additional resources will make it possible for EPA to nearly double the amount of publicly available HPV chemical test data, increasing the cumulative number of chemical data postings from 224 chemicals in 2002 to 420 chemicals in 2003 (16% of the 2,800 HPV's).

Under a parallel Voluntary Children's Chemical Evaluation Program that will be launched in 2002 (a pilot was started in 2001), EPA and industry will collaborate in fully assessing the risks associated with chemicals to which children are exposed. With our state partners we will work to establish a series of pilot programs to address TSCA responsibilities at the state level, where local knowledge of unique problems or solutions can bring greater efficiencies to this wide ranging program.

An important Agency priority is to develop and use valid chemical screens and tests to identify and characterize the risk of chemicals that may cause endocrine disruption in humans, fish and wildlife. In 2002 EPA will put in place an Endocrine Disruptor Methods Validation Subcommittee (EDMVS) made up of approximately 25 scientific experts representing outside interest groups. These experts will meet during 2002 and 2003 to provide advice and counsel to EPA on scientific issues associated with the conduct of studies necessary for validation of screening and testing methods listed in the Agency's Endocrine Disruptor Screening Program. The EDMVS will be reviewing the development of approximately 13 laboratory test methods.

Ensure Healthier Indoor Air for All

The Agency has set a goal of healthier indoor air for millions of students, staff, and faculty. To meet this goal, the Agency will reduce asthma incidents and other respiratory ailments by promoting improved indoor air quality and indoor environment management. By increasing the number of schools where "Tools for Schools" indoor air quality guidelines are adopted and implemented, healthier indoor air will be provided for millions of students, staff, and faculty. In FY 2003, improved air quality is anticipated for 1,050,000 students, staff and faculty through the voluntary Tools for Schools (TfS) program, including an effort to obtain commitments from five of the 50 largest school districts in the country to implement TfS.

In FY 2003, the Agency expects 848,000 Americans to be living in healthier residential indoor environments. Part of meeting this goal includes the expansion of EPA's successful community-based educational partnerships addressing sound indoor environmental management. In FY 2003, the Agency expects to utilize these partnerships to educate 136,000 people with asthma and their caregivers about improved indoor air quality techniques. Additionally, EPA will focus on indoor environment issues related to older Americans' health by assessing the links between environmental exposure and older Americans' health and developing activities to address those links. The Agency will also develop pilot programs with community organizations serving older populations in order to gather information and address and educate older Americans about indoor environmental issues.

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

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

Preventing pollution can be cost-effective to industry in cases where it reduces excess raw materials and energy use. P2 can also reduce the need for expensive "end-of-pipe" treatment and disposal, enable firms to avoid potential liability, and support quality improvement incentives in place at facilities. Current EPA strategies include institutionalizing preventive approaches in EPA's regulatory, operating, and compliance/enforcement programs and facilitating the adoption of pollution prevention techniques by states, Tribes, the academic community and industry.

In FY 2003, EPA is requesting additional resources to launch a bold new Advancing Environmental Stewardship in America's Communities Initiative. The Agency will be working hand-in-hand with States to challenge and assist American industry in achieving important national environmental goals through new innovations in product and service design, production, and delivery.

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

In this objective, EPA provides the national leadership so important to reducing the generation of municipal and industrial solid waste regulated under RCRA Subtitle D and to improving the recovery and conservation of materials and energy through source reduction and recycling. EPA encourages source reduction of municipal solid waste through its WasteWise program and encourages recycling and the recycling market through such programs as Pay-As-You-Throw and Jobs Through Recycling. In addition, working with public and private sector stakeholders, EPA promotes financial and technological opportunities for recycling/reuse businesses. In FY 2003, the Agency will serve as a catalyst for innovative source reduction and recycling in many industrial sectors, including waste reduction opportunities for construction and demolition debris, food wastes, tires, electronics equipment, carpet, transport packaging, and plastic beverage packaging. EPA will kick off an environmental retail initiative that encourages consumers and individuals to think about environmental issues at the "point of purchase."

In the hazardous waste arena, regulated under RCRA Subtitle C, the Agency's focus is on reducing the presence of priority chemicals in hazardous waste by 50 percent by FY 2005 (compared to a 1991 baseline). This goal is consistent with other national and international toxic chemical reduction efforts. In FY 2003 the Agency will encourage and support implementation at the Regional, state and local levels through voluntary pollution prevention partnerships that not only make economic sense but must also decrease human and environmental exposure to toxic wastes. By FY 2003, EPA plans to initiate partnerships with companies willing to make specific commitments to reducing hazardous waste as part of the Agency-wide Voluntary Chemical Reductions program.

The Agency will continue reducing the barriers to safe recycling of hazardous waste through changes to recycling regulatory standards and ongoing outreach to stakeholders to explore additional innovations. EPA will place particular emphasis on ways to increase safe hazardous waste recycling while reducing the burden for small businesses concerned with printing, electronics recycling, and metal finishing.

The Green Chemistry Challenge Program continues to be an effective catalyst for the behavioral change necessary to drive the research, development, and implementation of green chemistry technologies. In addition, this program also continues to provide an opportunity to quantitatively demonstrate the technical, environmental, and economic benefits that green chemistry technologies offer. In 2003, the Green Chemistry Program will be focusing its

outreach, awards, and research efforts to target: 1) audiences not currently involved in green chemistry product and process design; and, 2) specific high priority chemicals, products, and/or processes for which safer alternatives are not available.

To address continuing issues associated with PBTs, EPA launched a cross-office, cross-media PBT program in FY 1999. Through this effort, the Agency seeks to prevent, minimize and, when possible, eliminate PBTs which are harmful to both human health and the environment. By the beginning of FY 2003, the Agency plans to be well into the implementation of its Mercury National Action Plan, focusing on seven key priority areas. Critical measurement and monitoring efforts will be in their third year, facilities will be collecting PBT chemical release data under the new TRI rule, and submissions under TSCA for approval of new PBT chemicals for entry into commerce will be under close scrutiny.

Assess Conditions in Indian Country

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

In 2003, EPA is requesting a total of $57.5 million for Indian General Assistance Program grants. These resources will allow most Tribes to support at least one or two persons working in their community to build a strong, sustainable environment for the future. These stewards perform vital work by assessing the status of a Tribe's environmental condition and building an environmental program tailored to that Tribe's needs. Another key role of this workforce is to alert EPA of serious conditions requiring attention in the near term so that, in addition to assisting in the building of Tribal environmental capacity, EPA can work with the Tribe to respond to immediate public health and ecological threats.

EPA continues to consider additional approaches on how EPA and Indian Tribes might work in concert to protect public health and the environment in Indian country. As part of that effort, EPA is proposing to continue authority granted in FY 01 to enter into cooperative agreements with Tribes to assist EPA in implementing environmental programs in instances where the Tribe has not achieved primacy. Implementation of this approach would allow for a more gradual transition to full program authorization by allowing for varying degrees of Tribal involvement based on an individual Tribe's capabilities and interests.

Research

In FY 2003, health effects research under this goal will continue to focus on development of mechanistically-based predictive models for human health risk assessment, such as structure-activity-relationship models, to help determine testing needs under Section 5 of the Toxic

Substances Control Act (TSCA), which addresses the introduction of new chemicals into commerce. Research will address the need for methods to evaluate effects associated with a variety of exposure conditions and the special sensitivities of certain subpopulations (including children) based on age, genetic factors, and health status. These methods will be used to evaluate endpoints of toxicity that are qualitatively different from those of concern for the general population. EPA will continue to participate in the Agriculture Health Study (AHS). The primary objective of the EPA exposure study is to collect high quality exposure data that can be used to evaluate how accurately the AHS questionnaire classifies pesticide application activities and enables the prediction of applicator exposure and dose.

Also, EPA proposes in FY 2003 to begin a major research effort focused on biotechnology. Areas of research will include: 1) potential allergenicity of proteins introduced into the food supply by biotechnology, 2) potential adverse ecological effects on non-target species or as a result of unintended gene transfer; and 3) potential development of pesticide resistance in the target species. This research will result in improved capability to assess the risks of allergenicity from genetically altered food, improved capability to assess the ecological risks associated with genetically modified organisms, and tools to manage gene transfer and resistance.

External Factors

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

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

Large-scale accidental releases or rare catastrophic natural events could, in the short term, impact EPA's ability to achieve the objectives. In the longer term, new environmental technology, unanticipated complexity or magnitude of environmental problems, or newly identified environmental problems and priorities could affect the timeframe for achieving many of the goals and objectives. In particular, pesticide use is affected by unanticipated outbreaks of

pest infestations and/or disease factors, which require EPA to review emergency uses to ensure no unreasonable risks to the environment will result. EPA has no control over requests for various registration actions which include among others new products, amendments, and uses, so its projection of regulatory workload is subject to change.

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

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

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

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

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

Objective: Reduce Public and Ecosystem Risk from Pesticides

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Reduce Public and Ecosystem Risk from Pesticides	**$54,262.3**	**$56,026.3**	**$55,409.8**	**($616.5)**
Environmental Program & Management	$40,250.6	$42,020.1	$41,358.0	($662.1)
Science & Technology	$830.7	$920.7	$966.3	$45.6
State and Tribal Assistance Grants	$13,181.0	$13,085.5	$13,085.5	$0.0
Total Workyears	227.0	241.9	239.1	-2.8

Key Program
(Dollars in Thousands)

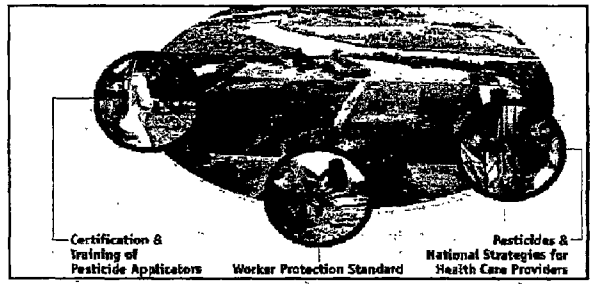
	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$222.1	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$598.6	$1,700.0	$0.0	($1,700.0)
Endocrine Disruptor Screening Program	$757.5	$750.5	$768.9	$18.4
Facilities Infrastructure and Operations	$0.0	$3,350.0	$3,423.3	$73.3
Homeland Security	$0.0	$482.4	$0.0	($482.4)
Legal Services	$261.9	$308.2	$328.6	$20.4
Management Services and Stewardship	$351.8	$382.5	$384.1	$1.6
Partnerships to Reduce High Risk Pesticide Use	$11,851.9	$10,407.0	$12,279.8	$1,872.8
Pesticide Registration	$12,072.3	$10,609.7	$11,016.6	$406.9
Pesticide Reregistration	$2,767.0	$3,793.3	$3,907.2	$113.9
Pesticides Program Implementation Grant	$13,085.5	$13,085.5	$13,085.5	$0.0
Regional Management	$18.2	$0.0	$21.9	$21.9
Safe Pesticide Applications	$10,135.4	$11,157.2	$10,193.9	($963.3)

FY 2003 Request

EPA will continue to assist farmers in transitioning to reduced risk pesticides and pest management practices as the Agency continues to implement the Food Quality Protection Act (FQPA) and restricts or removes older, riskier pesticides from the market. In FY 2003, EPA will continue to use a "whole farm approach" to pesticide management and pollution prevention. This approach simultaneously considers numerous risks associated with the agricultural use of pesticides, including spray drift, chemical runoff, pesticide disposal, groundwater protection, worker protection, and pesticide application techniques. This allows the Agency to pursue an integrated approach to pollution prevention. EPA will continue its commitment under this objective to protect agricultural workers, to certify and train pesticide applicators, to protect endangered species, non-target species such as benign insects, fish and wildlife, and ecosystems from the harmful effects of pesticides, to develop and implement environmental stewardship and integrated pest management pollution prevention strategies and to protect our nation's groundwater from pesticide contamination.

Reduce Human Exposure to Pesticide Use

In 2003, through the Certification and Training Program (C&T) and the Worker Protection Program (WP), EPA will continue its partnership with states and Tribes in educating workers, farmers and employers on the safe use of pesticides and worker safety. The C&T and the WP programs protect agricultural workers, employers, applicators, handlers and the public from the potential dangers posed by pesticides. The Worker Protection Standards offer protection to over three and a half million people who work with pesticides at more than 560,000 workplaces. The C&T program increases the competence of the applicators in handling and applying pesticides through training and certification (and recertification every three to five years) of private and commercial applicators of restricted use pesticides. C&T and WP also provide safety training for pesticide handlers and agricultural workers.

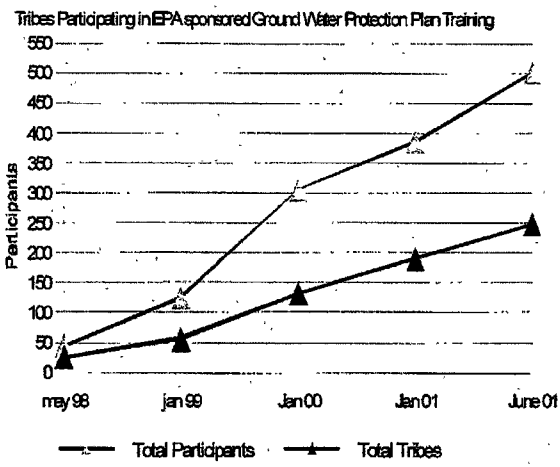


EPA will continue efforts to educate the public in the proper use of pesticides to prevent household and other pesticide misuse. EPA will focus its efforts in rural and urban areas with poor communities where there are disproportionate public health risks to residents, especially children.

EPA will employ product stewardship with manufacturers and distributors, and work with states to improve their certification and training programs. EPA continues to improve

consumer product labels, communicate proper handling of pesticide containers and their distribution, and direct enforcement activities to prevent improper sales and use of agricultural pesticides. EPA continues to be concerned with the use of certain pesticides that are likely to show up in ground-water. The Agency is pursuing options to assess and manage pesticide use and contamination potential of those pesticides. The Ground-Water Strategy and the development of pesticide management plans provide an ongoing means of preventing pesticide contamination of our ground-water resources.

Regions will lead the development of FQPA transition projects with commodity groups and provide strategic and technical assistance on project design, implementation, and evaluation. The "whole farm" approach, conducted in cooperation with USDA and FDA, will focus on area-specific problems. Due to variations in crops, pests and weather patterns in different locales, a regional approach will be employed to address local needs. This approach will rely on partnerships between EPA, state agencies (Departments of Agriculture, Departments of Environment and Land Grant Universities) and agricultural groups (farm bureaus and major commodity groups). The first stage of the initiative evaluates current farm operations including pesticide risk reduction technologies, Integrated Pest Management (IPM) and Best Management Practices (BMPS), soil and water conservation, handling and storage of hazardous materials and solid waste management. Model or demonstration sites are used for purposes of outreach, education and compliance assistance for other agricultural operations throughout the state.



Reduce Environmental Exposure to Pesticide Use

In FY 2003, EPA and USDA will continue to provide information about pest control options, organize and deliver pest management educational programs for agricultural producers, consumers, and other stakeholders on reduced risk pesticides and alternative pest control methods, such as IPM and Pesticide Environmental Stewardship (PESP). EPA will continue to support the development and evaluation of new pest management technologies.

The Pesticide Environmental Stewardship Program (PESP)and EPA's IPM activities are closely related in their efforts to promote risk reduction through increasing the use of safer alternatives to traditional chemical methods of pest control. PESP, through voluntary partnerships with pesticide users, seeks to reduce both health and environmental risks while incorporating pollution prevention strategies. Partners and supporters of PESP play vital roles in developing common sense approaches to pesticide risk reduction, including use of integrated pest management (IPM), biological and cultural controls, and weather and pest data decision models. PESP supporters have an interest in risk reduction because they use agricultural products or represent groups affected by pesticides. This program began in 1994, prior to FQPA, however, its focus is consistent with the statute's goals in reducing risk in agricultural and nonagricultural settings. PESP grants provide assistance to partners and supporters in developing and implementing risk reduction strategies. EPA will continue to coordinate with USDA in encouraging and supporting IPM practices, fostering the managed use of an array of pest control methods (biological, cultural, mechanical, and chemical) that achieve the best results with the least adverse impact to the environment.

Promoting Use of Integrated Pest Management In Schools

One of EPA's highest priorities is protecting children's health from unnecessary exposure to pesticides that are used in their schools to control pests. EPA is encouraging school officials to adopt Integrated Pest Management (IPM) practices to reduce children's exposure to pesticides while maintaining effective control of pests.

A goal of the IPM in Schools Initiative is to efficiently integrate an IPM program with the school's existing pest management plan and other school management activities. School management activities such as preventive maintenance, janitorial practices, landscaping, occupant education, and staff training are all part of an IPM program. The following steps are required to develop an IPM decision network:

1. Developing an official policy statement for school pest management
2. Designating pest management roles
3. Setting pest management objective for sites
4. Inspecting, identifying and monitoring for incipient pest populations
5. Setting action thresholds
6. Applying IPM strategies
7. Evaluating results and record keeping

EPA is helping schools understand and implement IPM through the distribution of printed publications, awarding grants to start IPM programs, offering workshops and courses and providing guidance and assistance through partnerships with universities and national associations.

The Endangered Species Protection Program (ESPP), started in 1988, is largely voluntary and relies on cooperation between the U.S. Fish and Wildlife Service (FWS), EPA Regions, states, and pesticide users. The Endangered Species Act is intended to protect and promote the recovery of animals and plants that are in danger of becoming extinct. Under the Act, EPA must

ensure that use of pesticides will not result in harm to species listed as endangered and threatened, or harm habitat critical to those species' survival. To implement the ESPP, labels of certain pesticides direct users to bulletins with information on how to protect endangered and threatened species from harm when using pesticides.

In order to protect listed species from harm resulting from pesticide use, the Agency will continue to do the following:

- Use sound science to assess the risk of pesticide exposure to listed species.
- Implement use limitations by adding a generic label statement; developing county bulletins containing maps of species' locations and pesticide use limitations; distributing the bulletins and other materials; and providing a toll-free telephone number to assist users in determining whether they need a bulletin and where to obtain one.
- Encourage individual states and Tribes to develop their own endangered species protection plans to meet the program's goals.

Antimicrobial pesticides are used to kill microorganisms on surfaces and objects in hospitals, schools, restaurants and homes. EPA registers and regulates antimicrobial pesticides under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). To obtain registration, manufacturers of antimicrobial products must meet basic standards, the foremost being:

- The product will not cause unreasonable adverse effects to human health or the environment.
- Product labeling and composition comply with the requirements of FIFRA.

Manufacturers are required to submit to EPA detailed and specific information concerning the chemical composition of their product; effectiveness data to document their claims against specific microorganisms and to support the directions for use provided in labeling; labeling that reflects the required elements for safe and effective use; and toxicology data to document any hazards associated with use of the product.

The Agency will continue to address concerns regarding the efficacy of public health products used to kill microorganisms in hospitals, schools, restaurants, and homes. The private and public sector communities including competitor registrants, have made the Agency aware of sterilizers and hospital disinfectants which may be ineffective. Sterilizers and disinfectants are increasingly vital to containing infections that are resistant to antibiotics in clinical settings. EPA has responded to this situation by developing a comprehensive strategy to improve the regulation of antimicrobial pesticides. In keeping with a major component of the strategy, EPA has greatly improved communications with the public, all levels of government, academia, user communities, industry, health professionals, trade organizations, and independent testing groups. Additionally, the Agency has enhanced and expanded its use of the Internet to educate the general public about the status and direction of the regulation for antimicrobial products.

The strategy also seeks to improve the regulation of antimicrobials through improvement of EPA's regulatory processes. EPA has committed resources to ensure that efficacy tests for

antimicrobial products are reliable and reproducible and that internal controls are improved to ensure the integrity of data submitted by registrants. Further, the Agency is developing a complaint system to handle concerns regarding ineffective products.

Reducing the risks of pesticide exposure is a particular challenge on Tribal lands. Native Americans often consume different foods than the average American, eating more wild game and fish following traditional subsistence diets, and using different farming practices. Their patterns of exposure may not be adequately represented in the general public dietary or other exposure information gathered by USDA, FDA or the registrant. Outreach and education tools must be matched to Tribal needs.

In 2003, the program will have completed a review of Tribal needs through a series of focus groups. In addition, the Agency will continue to team 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. The effectiveness of our field programs on Tribal lands is directly related to Tribal capacity for pollution prevention. Agency efforts include the following:

- Enhancing Tribal environmental program capacity by conducting multi-media risk assessments
- Providing training and technical assistance for Tribal environmental managers to conduct their own assessments and mitigation activities, with a primary emphasis on pollution prevention, to reduce children's exposure to pesticides as well as Persistent Bioaccumulative Toxics (PBTs), lead and other toxic substances

Regional programs are also expanding work to address Homeland Security concerns in FY 2002. Activities include expanded outreach to chemical and pesticide producers, distributors, and users; an additional field presence to monitor imports under FIFRA and TSCA; and coordination with partners to address security issues surrounding private pesticide applicator certification.

FY 2003 Explanation of Change from FY 2002 President's Budget

EPM

- (+$300,000) This increase reflects restoration of base contract dollars to Pesticides Certification and Training program. Funds were reprogrammed in 2002 to make up for the fee revenue shortfall in the salary account for tolerance reassessment and rereregistration staff.
- (+$550,000) This increase reflects restoration of base contract dollars to the registration program's analysis work to ensure newly registered pesticides are safe for the environment. Funds were reprogrammed in 2002 to make up for the fee revenue shortfall in the salary account for expedited registrations.

- (+$110,000) This increase reflects restoration of base contract dollars to the groundwater implementation program. Funds were reprogrammed in 2002 to make up for the fee revenue shortfall in the salary account for tolerance reassessments and reregistration staff.

- (+$310,000) This increase reflects restoration of base contract dollars to the Worker Protection program. Funds were reprogrammed in 2002 to make up for the fee revenue shortfall in the salary account for tolerance reassessments and reregistration staff.

- (-$107,000) This decrease reflects the change in funding source for the tolerance reassessment program from appropriated dollars in FY 2002 to fee revenue from the new tolerance processing fee.

- (-$482,000, -2.0 FTE) This decrease reflects completion of first phase of outreach to states and agricultural community to address security issues surrounding pesticide use, application and production.

- (- $600,000) This decrease reflects non-continuation of Congressional adds in the FY 2002 appropriation.

Annual Performance Goals and Measures

Agriculture Partnership

In 2003 Focus partnership development that indicates a successful transition on minor use commodity groups which use high risk pesticides (organopsphates, carbamates and B2 carcinogens)

In 2003 With USDA, universities, state lead agencies, and other stakeholders, promote the research and adoption of reduced risk pest management strategies (pilot APG)

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

In 2001 EPA began implementation of 12 model agricultural pilot projects

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Model agricultural partnership pilot projects	12	10-15 Addit.		Pilots
Successful transitions from high risk pesticides to effective alternative pest management practices			20-30	Transitions
Collaboration/outreach efforts			40	Efforts

Baseline: Under development

Pesticides in Groundwater

In 2003 Pesticides with high leaching and persistence potential managed to protect groundwater resources from contamination

In 2002 Pesticides with high leaching and persistence potential will be managed through significant actions to protect groundwater resources from contamination.

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Pesticides with high leaching and persistence potential managed to protect groundwater		22	25	Pest (Cum)

Baseline Thirty-one pesticides have been identified as of March 2000. Baseline revised in FY02 to administrative measure that tracks regulatory decisions that reduce impact of high leaching and persistent pesticides on the environment because of concerns about NAWQA data. i.e , it may not be replicating survey due to funding and survey design which may use different survey sites from year to year. New PM targets will be established in FY02.

Reduce Risk to Endangered Species

In 2003 None of the top 15 species on the Office of Pesticide Programs/Fish and Wildlife Service/ U.S Department of Agriculture (OPP/FWS/USDA) priority list of threatened or endangered species will be jeopardized by exposure to pesticides

In 2002 None of the top 15 species on the Office of Pesticide Programs/Fish and Wildlife Service/ U.S Department of Agriculture (OPP/FWS/USDA) priority list of threatened or endangered species will be jeopardized by exposure to pesticides

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Species on priority list jeopardized		0	0	Species

Baseline Top 15 species on OPP/FWS/USDA list for the year

Reduce Wildlife Incidents and Mortalities

In 2003 Reduce by 20 percent from 1995 levels the number of incidents involving mortalities to terrestrial and aquatic wildlife caused by pesticides

In 2002 Reduce by 10 percent from 1995 levels the number of incidents and amount of mortalities to terrestrial and aquatic wildlife caused by the 15 pesticides currently responsible for the greatest mortality to such wildlife

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Reported incidents involving mortalities to birds and fish		10%	20%	Reduction

Baseline 80 reported bird incidents (involving 1150 estimated bird casualties), 65 reported fish incidents (involving 632,000 estimated fish casualties)

Verification and Validation of Performance Measure

Congressional Performance Measure: Reduce by 20 percent from 1995 levels the number of incidents involving mortalities to terrestrial and aquatic wildlife caused by pesticides.

Performance Database: The Ecological Incident Information System (EIIS) is a national database of information on poisoning incidents of nontarget plants and animals caused by pesticide use. This database is maintained by the Environmental Fate and Effects Division of the Office of Pesticide Programs.
Data Source: Data are extracted from written reports of fish and wildlife incidents submitted to the Agency by pesticide registrants under Federal Insecticide Fungicide and Rodenticide Act (FIFRA), Section 6(a)(2), as well as incident reports voluntarily submitted by state and federal agencies involved in investigating such incidents.

QA/QC Procedures: There is a process to ensure data quality for this measure. Before entering an incident, a database program is used to screen for records already in the database with similar locations and dates. Similar records are then individually reviewed to prevent duplicate reporting. After each record is entered into the EIIS database, an incident report is printed that contains all the data entered into the database. A staff member, other than the one who entered the data, then reviews the information in the report and compares it to the original source report

to verify data quality. Scientists using the incident database are also encouraged to report any inaccuracies they find in the database for correction.

Data Quality Reviews: Internally and externally conducted data quality reviews related to data entry are ongoing. When resources allow incorporation of wildlife data from private organizations, such as the American Bird Conservancy, the new data and EIIS data are reviewed in concert for quality during data entry.

Data Limitations: This measure is designed to monitor trends in the numbers of acute poisoning events reported to the Agency. Because the data are obtained, in part, through voluntary reporting, the numbers of reported incidents may not accurately reflect the numbers of actual incidents. Therefore, it is important to consider the possible factors influencing changes in incident reporting rates over time when evaluating this measure.

New/Improved Data or Systems: The Office of Pesticide Programs is currently conducting a project with the American Bird Conservancy, reviewing the data in its Avian Incident Monitoring System on bird kill incidents caused by pesticides. These data will be incorporated into the EIIS. The project should improve the quantity and quality of data in the EIIS database on avian incidents.

Coordination with Other Agencies

EPA coordinates with various state, Tribal, and federal agencies as well as with private organizations to ensure that our strategic approaches to pollution prevention and risk reduction are comprehensive and compatible with efforts already in place. Achievement of this objective depends in part on successful cooperation with our partners and the successful implementation of our regulatory programs. The number of partnerships with private and public entities serves as an effective indicator of EPA's progress in meeting its stated objectives.

Coordination with state lead agencies and with the U. S. Department of Agriculture (USDA) provides added impetus to the implementation of the Certification and Training program. States also provide essential activities in developing and implementing the Endangered Species, Groundwater, and Worker Protection programs. States are involved in numerous special projects and investigations, including emergency response efforts. The Regions provide technical guidance and assistance to the states and Tribes in the implementation of all pesticide program activities.

EPA uses a range of outreach and coordination approaches for pesticide users, for agencies implementing various pesticide programs and projects, and for the general public. Outreach and coordination are essential to protect workers, endangered species, and groundwater; to provide training of pesticide applicators; to promote integrated pest management and environmental stewardship; and to support compliance through EPA's regional programs and those of the states and Tribes.

In addition to the training that EPA provides to farm workers and restricted use pesticide applicators, EPA works with the state Cooperative Extension Services designing and providing specialized training for various groups (e.g., training to private applicators on the proper use of personal protective equipment and application equipment calibration, how to handle spill and

injury situations, farm family safety, how to prevent drift, and pesticide and container disposal). Other specialized training is provided to public works employees on grounds maintenance, to pesticide control operators on proper insect identification, and on weed control for agribusiness.

Statutory Authorities

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Federal Food, Drug and Cosmetic Act (FFDCA)

Food Quality Protection Act (FQPA) of 1996

Clean Water Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

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

Objective: Reduce Risks from Lead and Other Toxic Chemicals

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Reduce Risks from Lead and Other Toxic Chemicals	**$33,927.9**	**$36,423.5**	**$36,355.9**	**($67.6)**
Environmental Program & Management	$20,130.6	$22,741 5	$22.673.9	($67.6)
State and Tribal Assistance Grants	$13,797.3	$13,682.0	$13,682.0	$0.0
Total Workyears	139.3	144.2	144.7	0.5

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$96.8	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$130.7	$380.0	$0.0	($380.0)
Facilities Infrastructure and Operations	$0.0	$1,940.1	$2.076.6	$136.5
Grants to States for Lead Risk Reduction	$13,682.0	$13,682.0	$13.682.0	$0.0
Homeland Security	$0.0	$150 0	$0.0	($150.0)
Lead Risk Reduction Program	$14,214.3	$13,092.6	$13,166.3	$73.7
Legal Services	$188 8	$220.4	$238.9	$18.5
Management Services and Stewardship	$58.6	$182 9	$197.6	$14.7
National Program chemicals: PCBs, Asbestos, Fibers,and Dioxin	$6,103.8	$6,775.5	$6,994.5	$219.0

FY 2003 Request

Lead Risk Reduction Program

EPA is working closely with other Federal Agencies to eliminate childhood lead poisoning. EPA establishes many of the standards for lead abatement and hazard levels that guide state, private and federal activities. HUD grants speed the abatement process in older housing. EPA and the states and tribes ensure there are enough trained, certified professionals to do this potentially hazardous work. Local health departments also have a key role in identifying priorities for abatement based on health impacts to children. During 2003, the states, Tribes and EPA will continue to implement the Lead Based Paint Training & Certification Program in all fifty-five states and territories and in Tribal lands. In the lead regulatory program, EPA will work towards finalizing one major rule setting standards for training and certification for renovation and remodeling activities, and work towards proposing a rule regarding the deleading of bridges and other structures. EPA's FY 2003 lead activities will make significant contributions to virtually eliminating lead poisoning for our nation's children.

The concentration of lead in a child's blood is typically used as an index of lead exposure. Over the past decade, there has been concern about blood-lead levels once thought to be safe. Since 1975, the Centers for Disease Control and Prevention (CDC) has lowered the blood-lead level considered elevated for children from 40 ug/dl (micrograms per deciliter) to 10 ug/dl (the evidence of health effects below 10 ug/dl is not sufficiently strong to warrant concern).

According to HUD's National Survey of Lead and Allergens in Housing, an estimated 38 million homes (40percent of all homes) contain some lead-based paint. The likelihood, extent, and concentration of lead-based paint vary with the age of the building. Eighty-seven percent of housing units constructed before 1940, 69 percent of units constructed between 1940 and 1959, and 24 percent of units constructed between 1960 and 1977 contain some lead-based paint. Over five million (or 14 percent) of these homes with some lead-based paint have children under age six in residence. Subchapter IV of TSCA (the 1992 Residential Lead-Based Paint Hazard Reduction Act) focuses on children younger than six years.

Small children like to put things in their mouths. Ingestion of lead-contaminated dust and soil through normal hand-to-mouth activity is the primary pathway of lead exposure to U.S. children under six years of age. Lead can contaminate dust when lead-based paint deteriorates, or when lead-based paint is disturbed in the course of renovation, repair, or abatement activity. Soil contaminated with lead from deterioration of exterior lead-based paint, industrial emissions, or from past uses of leaded gasoline may be ingested directly or contribute to indoor levels of lead-contaminated dust when tracked into the home. Children may also be exposed to lead through ingesting lead-based paint chips from flaking walls, windows, and doors or from chewing on surfaces covered with lead-based paint. Other sources of lead exposure include, but are not limited to, lead-contaminated food and drinking water and parental occupational exposure to dust and airborne lead particles.

Considerable progress has been made on a number of different fronts in reducing environmental lead levels. In 1973, the Federal government began taking steps to eliminate sources of lead. Efforts include EPA phasing out leaded gasoline and the Consumer Product

Safety Commission (CPSC) banning the production and sale of lead-based paint for residential use in 1978. In addition, EPA has implemented more stringent standards for lead in drinking water, and the domestic canning industry voluntarily eliminated the use of lead in solder to seal food cans. As a result of these past and ongoing efforts, children's blood levels have declined over 80 percent since the mid-1970s.

Data from the National Health and Nutrition Examination Survey (NHANES) conducted by the National Center for Health Statistics indicate that from 1976-1980 to 1999 the geometric mean blood lead level for children aged 1-5 years decreased from 15.0 micrograms per deciliter (ug/dL) to 2.0 ug/dL. According to NHANES III Phase 2, conducted from 1991 to 1994, approximately 900;000 children aged 1-5 years had blood lead levels equal to or exceeding 10 ug/dL, the level of concern for children established in 1991 by the Centers for Disease Control and Prevention (CDC). More recent NHANES estimates of the number of children with blood lead levels at or above 10 ug/dL are not available. However, data reported to CDC from nineteen state surveillance programs show that the proportion of tested children under age 6 with blood lead levels at or above 10 ug/dL decreased from 1996 to 1998.

Although lead exposure can affect children across all socioeconomic strata and in all regions of the country, children in poor inner-city communities, however, are disproportionately affected because lead-based paint hazards are more prevalent in deteriorated older housing and the overall ambient level of environmental lead tends to be higher in inner cities. Nationally, children in Medicaid comprise 80 percent of children with blood lead levels 15 ug/dl and above. Studies by the Centers for Disease Control (1988-1991) indicate that children living in central cities are three to four times more likely to have blood-lead levels equal to or exceeding 10 ug/dl than those outside central cities, with the highest prevalence in cities where populations exceed one million.

EPA, under Subchapter IV of TSCA, assists and guides federal activities aimed at reducing the exposure of children in homes with lead-based paint. Other Federal agencies, such as HUD and Health and Human Services (HHS), via the National Institute for Occupational Safety and Health and the CDC, also play important roles. In the past six years, EPA has made great strides in protecting children from lead poisoning through a combination of rulemaking, education, research, and partnerships. EPA has promulgated regulations to set up a federal infrastructure, including the lead accreditation, certification and workplace standards rule for targeted housing, the lead real estate notification and disclosure rule (with HUD), the lead renovation information rule, and standards identifying lead hazards in paint, dust and soil. The public education programs and tools developed include a national clearinghouse to provide the public with information on lead; and grants to states and Tribes to establish accreditation; certification and workplace standards programs for targeted housing.

Grants to States for Lead Risk Reduction

EPA has approved those states, territories and Tribes that intend to run programs for lead accreditation certification, and workplace standards in targeted housing. Although all states, territories and Tribes will not adopt the program, we intend to encourage several more to do so. However, EPA will be required to run a Federal lead program in 15 to 20 states and in most of the tribal lands and U.S. territories.

With implementation of the training, certification and accreditation program by states, territories or tribes, or in some cases by EPA, additional data is becoming available to help measure progress in reducing childhood lead poisoning and elevated blood-lead levels. In the future, EPA is working to be able to measure progress in reducing lead-based paint exposures through the collection of data associated with the Lead Abatement Program and has developed pilot measures projects to test their viability. In addition, the Agency will know how many professionals become certified as risk assessors, inspectors, workers or supervisors. This data will be used to measure the growth of a well-trained workforce capable of performing abatements safely and reliably.

National Program Chemicals Program

Most chemicals were introduced into commerce before the risks were known. A number of these chemicals are both prevalent and high-risk. The Agency has established a national program to manage reductions in use, safe removal, disposal or containment of these chemicals, as appropriate. Significant risks are well established for PCBs, asbestos, and dioxin, for example, and reductions in use and releases have been important to reducing exposure of the general population and sensitive subpopulations. Risk reduction efforts on these chemicals will continue to meet the mandates under TSCA and fulfill the commitments made in domestic and international

Dioxin Exposure Initiative

The EPA Dioxin Exposure Initiative (DEI), begun in 1994, is a cross-media effort to develop the scientific tools and understanding needed to quantitatively link dioxin sources to exposure of the general population. DEI scientists are working back through exposure pathways to identify the points of origin of current dioxin exposure and the relative contribution different sources make to dioxin risks. This information will allow EPA, the states and other federal agencies to focus their risk management attention on those sources and pathways of greatest public health significance.

Results from the DEI have already resulted in significant advances in our understanding of dietary routes of exposure. In addition, DEI results to date have established baseline measurements of dioxins in food and air that will permit the tracking of environmental trends and evaluation of the effectiveness of dioxin risk management programs.

In FY 2002, activities will focus on operation of the National Dioxin Air Monitoring Network (NDAMN), continuation of field and chamber studies to characterize dioxin from uncontrolled combustion sources, air transport modeling of 2000 emission inventory, and cooperative efforts with FDA and USDA to identify and quantify dioxin pathways in animal feeds.

Program outputs will include issuing a final 2001 dioxin inventory, results of the 2002 NDAMNS cycle, and results from round 1 of EPA/USDA animal feed studies. Continuation and strengthening of the DEI is a central theme in EPA dioxin strategy development. USDA and FDA have been active partners in the planning and implementation of many DEI projects.

agreements. In 2003, EPA's PCB control efforts will continue encouraging phase out of PCB electrical equipment, ensuring proper storage or waste disposal methods and capacity, and fostering PCB site cleanups. These activities are reflected in our Annual Performance Goals which measure disposal trends since 1990. Recent rulemakings have provided industry with the opportunity to propose alternative risk-based PCB cleanups. Also, the Agency will continue to review existing approvals for facilities that treat, store and/or dispose of PCBs, on a five to ten year renewal cycle.

The Agency will also pursue opportunities for risk reduction for mercury, and for certain industrial fibers that may pose risks in the workplace. In 2002 EPA is coordinating with the states to develop a strategy for addressing mercury. Approximately 10 percent of women in the U.S. have mercury levels in their blood within one-tenth of potentially hazardous levels. This indicates a very narrow margin of safety, especially since mercury is one of the materials that accumulate in the system. Other efforts will focus on outreach and technical assistance in the asbestos program for schools, in coordination with the Occupational Safety and Health Administration and the states, as needed. A new project to determine the risks to homeowners and remodelers from asbestos-contaminated vermiculate home insulation is underway and should be completed in 2002.

EPA plans to develop an agencywide dioxin strategy to respond to new findings in the scientific community concerning the potential risks of dioxin and address dioxin risk management in a more comprehensive cross-media approach. EPA will better examine reducing dioxin exposure, focusing on identifying and better quantifying the link between dioxin sources and the general population exposure.

FY2003 Explanation of Change from the FY2002 President's Budget

EPM

- (-$170,000) This decrease to the Lead program's outreach activities reflect a hold on the award of certain public outreach grants while the program is undergoing evaluation and competitive sourcing is implemented. Regulatory support is also decreased to reflect progress toward completion of the regulatory requirements for the lead program.

- (-$150,000) This decrease reflects completion of first phase of outreach to states and industry regarding chemicals of potential concern for terrorists threats.

- (-$350,000) This decrease reflects non-continuation of Congressional Adds from the FY 2002 appropriation.

Annual Performance Goals and Measures

Lead Regulatory Standards

In 2001 EPA finalized a rule that establishes standards regarding hazardous levels of lead in paint, dust and soil

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Lead Hazard Standards Rule - develop final	1 final			Rule

Baseline

Safe PCB Disposal

In 2003 Promote safe disposal of PCB-contaminated equipment and waste

In 2002 Promote Safe disposal of PCB contaminated equipment and waste.

In 2001 Capacitor, Transformer and Bulk Waste data reported by industry on a calendar year basis and not available until September 2002

The Transfomer Reclassicifcation Rule was published on April 2, 2001.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Safe Disposal of Transformers	Avail 9/1/02	10000	10000	Transformers
Safe Disposal of Capacitors	Avail 9/1/02	22000	25000	Capacitors
Safe Disposal of Bulk Waste	Avail 9/1/02	660,000,000	660,000,000	Kg Bulk Waste
Develop Final Transformer Reclassification Rule				Rule

Baseline Baseline for Capacitors 1 85 million units, Transformers 2.20 million units, baseline for bulk waste disposal is based on annual disposal of PCB bulk waste from 1990-1995

Lead Certification and Training of Lead Abatement

In 2003 Reduce lead exposure in housing units and in the deleading of bridges and structures

In 2002 Implement certification and training of lead abatement professionals

In 2002 Prepare rules on training, accreditation and certification requirements for renovation and remodeling activities and training, accreditation and certification requirements for lead-based paint activities in buildings and superstructures.

In 2001 EPA did not finish this rule

In 2001 More than 2,000 individuals were certified as lead abatement professionals. This number was estimated from the monthly average of incoming Certification Applications An improved tracking mechanism is being negotiated with a contractor for future years

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Evaluate results from pilot test of indicators and modify for implementation nationwide.				Analysis
Building and Superstructure Rule		In development	1 Proposed	Rule
Certified individuals only in states with federally administered program	>2,000			Certified
Certified nationally (federally-administered and state-administered program)		4000	5000	Certified

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of Abatements			pilot (TBD)	Notificati
Pilot Regional effort to monitor reduction in lead exposures			3	Regions
Renovation and Remodeling Rule	incomplete	in development	1 Proposed	Rule
Administer data collection grants to Tribes to determine Tribal lead exposure			15	Grants

Baseline: Baseline will be established in 2001. (Note: 2003 goal of 5000 assumed that both EPA and state certifications would be counted. We have been unable to confirm when/if we will get state data, so are now limiting this to EPA data.) Rule development was initiated in 1998; no consistent standard for abating lead paint for renovation or buildings/superstructures existed prior to Title X.

Verification and Validation of Performance Measures

Performance Measure: Number of certified individuals nationally

Performance Database: Regional Office records.

Data Source: Currently, all information is received through informal reporting from Regional offices, and originates from information submitted via certification applications. In the future, we will track certifications centrally.

QA/QC Procedures: Applicants are given photo identifications to prevent cheating at certification testing centers. EPA Headquarters reviews applications for completeness, including checking for the required information and materials. Regions review applications for quality, including a more substantive review of the application. Third-party test centers have extensive QA/QC controls under the contract.

Data Quality Review: Data quality reviews of records maintained at the test centers are conducted during routine compliance monitoring of the centers using Office of Enforcement and Compliance Assurance procedures. The reviews have found occasional discrepancies but no regional or national trends have come to light requiring systemic modifications to any record-keeping or QA/QC procedures.

Data Limitations: We have certification data from nine out of ten EPA regional offices. We expect that the remaining regional office would add no more than 300 certified entities to the baseline count. If an individual or firm was certified in more than one EPA Region, they have been double-counted. We expect that these difficulties will be resolved once we have in place a centralized database.

New/Improved Data or Systems: We hope to have a centralized, contractor-run tracking system in place by 2003.

Coordination with Other Agencies

The success of EPA's lead program depends on effective coordination with other Federal agencies, states and Indian Tribes. In 2002-2003, EPA plans to propose a rule for lead-based paint renovation and remodeling (R & R) activities. EPA will coordinate with HUD to clarify how these new rules may affect existing EPA and HUD regulatory programs, and with the Federal Highway Administration of DOT and with OSHA of DOL on worker protection issues. Both the R & R Rule and the Buildings and Structure Rule could result in worker protection requirements for personnel from State and local governments. Currently these workers are not subject to OSHA construction requirements. EPA will continue to work closely with state and Federally recognized Indian Tribes to ensure that: 1) authorized state and Tribal programs continue to comply with requirements established under TSCA; and 2) the ongoing Federal accreditation certification and training program for lead professionals is administered effectively; and 3) the States and Tribes adopt the R & R and the Buildings and Structures Rule when these rules become effective.

EPA has a Memorandum of Understanding (MOU) with HUD on coordination of efforts on Lead-based paint issues. As a result of the MOU, EPA and HUD co-chair an Interagency Task Force that has been regularly meeting since 1989. There are 14 other Federal agencies including CDC and DOD on the Task Force.

EPA, HUD and the National Institutes of Standards and Technology have recently been working to identify reliable at-home test kits for lead based paint to recommend to do-it-yourself renovators. HUD and EPA also have a joint Lead Hotline and share enforcement of the Disclosure Rule.

Mitigation of existing risk is a common interest for other federal agencies addressing issues of asbestos and PCBs. EPA will continue to coordinate interagency strategies for assessing and managing potential risks from asbestos and other fibers. Coordination on the safe PCB disposal is an area of ongoing emphasis with the Department of Defense (DoD), and particularly with the US Navy, which has special concerns regarding ship scrapping. PCBs and mercury storage and safe disposal are also important issues requiring coordination with the Department of Energy and DOD as they develop alternatives and explore better technologies for storing and disposing high-risk chemicals.

Statutory Authorities

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

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

Asbestos Hazard Emergency Response Act (AHERA)

Asbestos School Hazard Abatement Act (ASHAA)

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

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Manage New Chemical Introduction and Screen Existing Chemicals for Risk	**$69,315.0**	**$75,337.8**	**$77,538.2**	**$2,200.4**
CREDIT SUBSIDY RE-ESTIMATE	$3,580.0	$0.0	$0.0	$0.0
Environmental Program & Management	$45,428.6	$53,190.7	$52,388 6	($802.1)
Science & Technology	$20,306.4	$22,147.1	$25,149.6	$3,002.5
Total Workyears	379 6	400.3	391.2	-9.1

Key Program
(Dollars in Thousands)

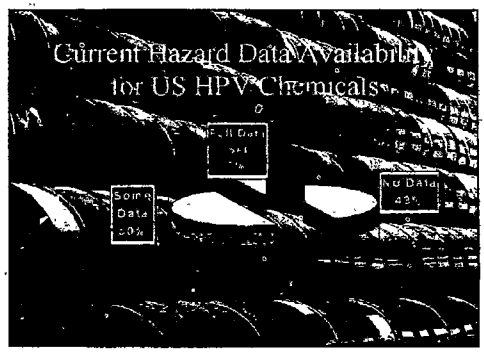
	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$233.8	$0.0	$0.0	$0 0
Community Assistance	$556.5	$474.4	$507.1	$32.7
Congressionally Mandated Projects	$486.5	$487.5	$0.0	($487.5)
Endocrine Disruptor Screening Program	$3,634 1	$2,952.8	$2.934.2	($18.6)
Environmental Monitoring and Assessment Program. EMAP	$143.0	$66.0	$0.0	($66.0)
Existing Chemical Data, Screening, Testing and Management	$24,522.4	$28,286.4	$28,331.9	$45 5
Facilities Infrastructure and Operations	$1,270.3	$5,983 8	$5,600.5	($383.3)
Homeland Security	$0 0	$1,102.2	$0.0	($1,102.2)
Legal Services	$803.3	$912 3	$979.6	$67.3
Management Services and Stewardship	$1,004.2	$824.5	$725.8	($98.7)
New Chemical Review	$12,620.2	$12.477.2	$13,123.8	$646.6
Research to Support Safe Communities	$20,093.7	$21,593.6	$25,149.6	$3,556.0
Science Coordination and Policy	$0.0	$177.1	$185.7	$8.6

FY 2003 Request

This objective includes work in four broad program areas:

- Governing the introduction of new chemicals into commerce (chemicals in the process of commercialization)
- Assessing the risks of existing chemicals (chemicals in commerce)
- Screening and testing chemicals for endocrine disruptor effects
- Assessing the safety of biotechnology products and genetically modified organisms

These programs are pivotal to reducing current and future risk by preventing or controlling the production of new chemicals that pose unreasonable risks and assessing and addressing the risks of chemicals already in commerce.



One of the major program priorities in FY 2003 is the Chemical Right-to-Know (ChemRTK) Program, which focuses on addressing the lack of critical human health and environmental effects information on industrial chemicals. Currently there is little information available on the potential hazards of most chemicals used in everyday products and industrial processes.

ChemRTK's High Production Volume (HPV) Program targets the 2,800 chemicals produced in the highest volumes (one million pounds or greater) in the U.S. Working in partnership with industry, the Agency will ensure that basic screening-level data on these chemicals are made publicly available by 2005. ChemRTK will help prioritize EPA's chemical risk assessment and management activities and increase the amount of information on chemical exposures and risks that EPA can provide to the public. Using this information, states, communities, industry, and the public will be empowered to act on their own and in concert with EPA to address risks that may be posed by these chemicals.

Industry response to the HPV Challenge has been overwhelming: more than 460 companies have voluntarily committed themselves to providing EPA with test data for 2,155 chemicals and 187 chemical categories of the 2,800 HPV chemicals. EPA has already commenced its review and public posting of these company submissions. By the end of FY 2002, the Agency expects to have posted test data covering 10 percent of the HPV chemicals. The program received additional funds in 2002 through a Congressional Directive, which is enabling faster progress. EPA is requesting a $2 million increase in base funding for ChemRTK in FY 2003 to maintain the higher pace and create a better match with the pending industry data

submissions. These additional resources will make it possible for EPA to make 60 percent more data publically available for HPV chemicals, increasing the cumulative number of chemical data postings from 280 chemicals in 2002 to 448 chemicals in 2003 (16 percent of the 2,800 HPV's).

In FY 2002 and 2003, EPA will continue its work under the Acute Exposure Guidelines program to develop and provide key information for assisting communities in identifying and assessing the risks associated with extremely hazardous substances in communities and workplaces at the local level. The purpose of this work is to develop scientifically credible, nationally uniform, short-term exposure limits for a wide range of acutely toxic substances that are protective of the general public, including children, infants, the infirm, and the elderly. At present, substantial information on chronic exposure to ambient levels of industrial chemicals available to assist communities. However, information on the risks to human health from short-term exposure to acutely toxic chemicals is seriously lacking. This information is critical in assisting local communities in the assessment of risks from chemical accidents, chemical terrorism, remediation of superfund sites, and current programs on the destruction of chemical warfare agents.

This project compliments the HPV program by extending the information of that program beyond the identification of acutely toxic substances and the availability of published toxicity data. This program uses sound science to interpret the acute toxicity data and provide meaningful and useful information on the risks, hazards, and safe levels of acutely toxic chemicals. The goal of the program, which commenced in FY 2001, is to provide 15 guidelines for each of approximately 400 acutely toxic chemicals over eight to ten years. In 2001, 75 guidelines were developed for five chemicals; 22 chemicals are targeted for 2002, and 30 in 2003. Increased FY 2002 ant-terrorism funding will enable the development of guidelines for 11 additional chemicals, bringing the FY 2002 targets to 495 guidelines for 33 chemicals. The information will be disseminated through the 50 State Emergency Response Commissions (SERCs) to more than 3500 Local Emergency Planning Committees (LEPCs) established under SARA Title III. The project also will assist communities in chemical emergency prevention under CAAA 112(r) by enabling scientifically credible risk assessments of operations procedures, engineering, design, and construction of local chemical facilities.

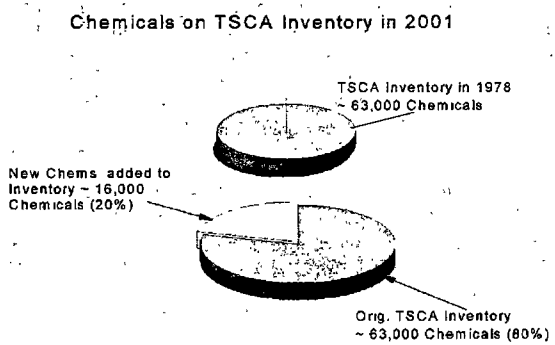
This project represents a first-of-a-kind collaborative effort involving scientists and clinicians from both the public and private sectors. It involves the most comprehensive and cost effective data gathering, data assessment, peer review process ever assembled for purposes of establishing exposure limits for hazardous chemicals. This effort is conducted by a Federal Advisory Committee established under the Federal Advisory Committee Act (FACA) representing a cross section of the scientific community in the public and private sectors. The final values are reviewed, approved, and published by the National Research Council of the National Academies.

New Chemicals Program

The Toxic Substances Control Act (TSCA) requires EPA to review a chemical or microorganism before it is manufactured commercially (i.e., a "new" chemical) to determine whether it can be handled and used safely. If the Agency determines that an unreasonable risk

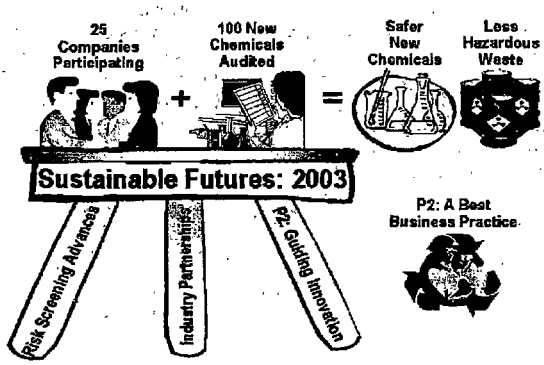
may be posed to people or the environment, EPA can block the chemical's entry into commerce or establish control measures to ensure the chemical's safety in the marketplace. Since 1979, EPA has reviewed more than 33,000 pre-manufacturing notifications (PMNs) and taken actions to control risks for about 10 percent of these chemicals and microorganisms.

In 2003, EPA expects to receive and assess within the TSCA mandated 90-day review period approximately 1,800 additional PMNs. As part of its review of new chemical substances, the Agency has developed an array of innovative, efficient screening mechanisms. During the new chemical review for commercial chemicals in the process of commercialization, the Agency routinely works with industry to share any options and suggestions it may have on process improvements, or to produce new chemicals more safely. The New Chemicals Program also examines new microorganisms derived from biotechnology to ensure that potential risks have been evaluated and that adequate controls are in place before they are released into the environment. Recent regulatory changes have increased the rate of new biotechnology chemicals submitted for review. Other efforts include outreach and technical assistance to encourage safer chemicals and chemical production and use.

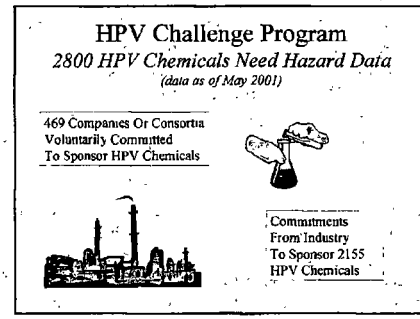


The chart above indicates substantial progress made in the New Chemicals Program since its inception in 1978. In FY 2001(partial year, Oct-July), there were potentially 79,120 chemicals in commerce; 16,514 of these chemicals, or 20 percent, had gone through the TSCA Premanufacture Notice review process and entered into commerce following submittal of a Notice of Commencement of Manufacturing. These chemicals have been assessed for risks, and controls are in place as necessary. In recent years, a growing number of these chemicals are becoming "greener" due to several influences. Although the New Chemicals Program has always been inherently a Pollution Prevention (P2) program, it has evolved over the years with an increasing P2 focus. In addition, the New Chemicals Programs continues to coordinate with several voluntary P2 programs such as the P2 Framework, Green Chemistry, Green Engineering, and P2 Recognition Programs (described elsewhere).

In 2002, the Agency plans to launch "Sustainable Futures," a program which offers an expedited Pre-Manufacturing Notification process to companies who take training in the use of certain screening methods and apply the results toward development of safer chemicals. The Agency, working with others in the scientific community, has developed computerized methodologies that look at the structure of chemicals and estimate potential hazard and risk. The methods, called the Pollution Prevention Framework and the PBT Profiler, can be used to identify hazardous chemicals, even before product manufacture begins. EPA is encouraging industry to use these screening-level tools, used internally by EPA, to evaluate chemical alternatives early in the research and development stage.



In 2001, EPA's technology transfer efforts introduced these risk-screening methods to industry, and the response was both positive and dramatic. The participating companies have indicated that the methods identified safer alternatives early in the product development cycle, when pollution prevention, product substitution, and risk reduction are most cost effective. The companies also found that the models reduced production costs, shortened time to market, and reduced generation of waste. In 2001, under a pilot program, EPA provided regulatory relief to two companies who used the tools as an integral part of product development. In a win-win result, industry saved time and money and the environment saw inherently safer chemicals. In FY 2002, EPA intends to expand the use of the risk screening tools developed from Project XL to other companies to assist them in selecting safer chemicals for use in their products and processes.



Assessing Existing Chemicals: The Chemical Right-to-Know Program

One of EPA's critical responsibilities under TSCA is to identify and control any unreasonable risks that might be associated with the thousands of chemicals which are already in commerce. The Agency will complete assessments of Methyl Tertiary Butyl Ether (MBTE), a gasoline additive, and several other chemicals used in a wide variety of commercial products and industrial processes. As described in the request section, EPA's strategy for addressing the remaining chemicals in commerce is to foster the public availability of risk screening information to allow states, communities, industry, and the public to act on their own and in concert with EPA to reduce risks posed by these chemicals through the Chemical Right-to-Know program (ChemRTK).

In FY 2003, the ChemRTK program will continue to review and make publicly available hazard screening data on High Production Volume (HPV) chemicals. While the focus in the early years of program was on evaluating the adequacy of existing data, at this point in the program's evolution, new data generated under the program will now need assessment. HPV chemicals are those that are manufactured or imported into the US in quantities of at least one million pounds per year.

Little hazard information exists in the public domain for many of these chemicals that we use daily. Only seven percent of the 2,800 HPV chemicals have a full set of basic information on health and environmental effects. Only 25 percent of consumer chemicals (those used by children and families in consumer products) have a full set of basic information. In addition, the Agency will continue working with other countries in the Organization for Economic Cooperation and Development's (OECD's) Existing Chemicals Program to further expand the availability of risk screening information.

Without this information, we may not be able to effectively identify and evaluate the human health and environmental risks posed by these chemicals (although the HPV Challenge screening program does not include actual risk assessments on these chemicals). In addition, relatively little is known about the unique effect on children's health of chemicals that are widely used in children's products or otherwise have high potential for exposure to children. At the same time, the design of the ChemRTK program also places an emphasis on reducing the need for additional tests involving animals wherever possible.

Basic screening-level information for all 2,800 HPV chemicals are being made available to the public on an ongoing basis through a voluntary industry challenge and a series of test rules for those data not obtained through the voluntary program. The resulting hazard data are being broadly disseminated to the public in a format that will be easily understood. The response from industry to this initiative has been enthusiastic: 469 companies have sponsored 2,155 chemicals and 187 chemical categories. The Agency intends to further evaluate whether additional assessment is warranted for chemicals to which children are exposed, under a parallel Voluntary Children's Chemical Evaluation Program that will be launched in 2002 (a pilot was started in 2001).

Much of the focus of the Agency in FY 2002 was on assessing the validity of small groups (or categories) of HPV chemicals proposed by industry. Such categories of chemicals can be considered together because of their similar structure or toxicological properties. The Agency continues to be actively engaged in assessing the validity of such categories of chemicals, and allowing the public to access the hazard data on these chemicals as the data are obtained from industry. The requested $2 million increase in base funding for ChemRTK will bolster our ability to keep pace with industry data submissions, and to increase the cumulative number of chemical data postings from 280 chemicals in 2002 to 448 chemicals in 2003 (16 percentof the 2,800 HPV's).

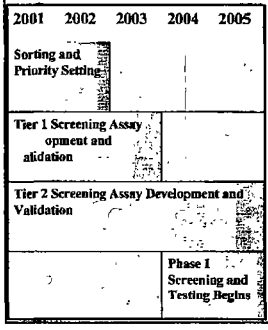
As new data generated to support these categories become available, in FY 2003, the Agency will shift its focus to evaluating the category analyses submitted by industry sponsors to ensure that the assumptions made in formulating the categories are met and that the use of a category approach to assessing, interpolating and extrapolating the health and environmental effects across the individual chemicals within them is justified. As such, the focus in FY 2003 will be on priority setting, to determine whether further action -- whether it be higher order testing, collection of exposure data to begin an evaluation of risk, and/or risk management action undertaken by the Agency, industry, or the informed public -- is warranted. In addition, efforts to utilize the hazard classification guidelines currently being developed in the OECD will be undertaken. These efforts will be coordinated with a pilot effort now being started in the OECD's Existing Chemicals Program.

The Agency, in FY 2003, will continue to work with stakeholders to explore possibilities for identifying use information. Use information would allow the Agency to identify chemical exposure pathways, better assess risks associated with such exposures, and identify potential unsafe uses of household chemicals and other consumer products.

Endocrine Disruptor Program

There is increasing evidence that fish and wildlife have been affected by chemicals that interfere with the endocrine system resulting in abnormal development, low fertility and greater susceptibility to disease. The link to human disease is less clear at ambient environmental levels, although effects have been observed at high exposure sites.

Timeline for the Implementation of the Endocrine Disruptor Screening Program



•Sorting and Priority Setting narrows the list of chemicals from the list of 87,000 using existing chemical data and screening tools
•Tier 1 is a battery of in vitro and in vivo short-term screening assays that identify chemicals having the potential to interact with the estrogen, androgen and thyroid systems Chemicals positive in Tier 1 screening battery will be tested in Tier 2.
•Tier 2 consists of multi-generation tests in mammals, birds, fish, amphibians and invertebrates and will provide information on the adverse effects of the chemical and other information needed to assess the hazard of substances to these organisms.
•Phase 1 Starts testing chemicals from the sorting and priority setting stage using the validated Tier 1 assays.

The Food Quality Protection Act Amendments of 1996 mandated that EPA test pesticides for estrogen effects on human health. The Safe Drinking Water Act Amendments of 1996 permit EPA to test contaminants found in drinking water sources. Given the controversial nature of the endocrine disruptor issue, the Agency established the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) under the Federal Advisory Committee Act. EDSTAC included representatives from industry, environmental and public health groups, academia, and Federal and state government. On the basis of science, EDSTAC recommended that the screening program include: commercial chemicals and contaminants; estrogen, androgen and thyroid endpoints; and wildlife as well as human health effects.

EPA based its EDSP on the EDSTAC recommendations. The EDSP is a two-tiered program. Tier 1 is a battery of in vitro and in vivo short-term screening assays that identify chemicals that have the potential to interact with the estrogen, androgen, and thyroid systems. Chemicals positive in the Tier 1 screening battery will be tested in Tier 2. Tier 2 consists of multi-generation tests in mammals, birds, fish, amphibians and invertebrates and will provide information on the adverse effects of the chemical and other information needed to assess the hazard of substances to these organisms. FQPA mandated that all assays used in the EDSP be validated. Validation is a science-based process and has required application of cutting edge science, domestic inter-agency and international cooperation, and on-going stakeholder involvement. In 2003 EPA will continue to develop and validate Tier 1 and 2 screens and tests. In 2004 EPA will start testing chemicals identified through the Sorting and Priority Setting Stage using validated Tier 1 screening assays.

Research

There are over 70,000 existing chemicals in the Toxic Substances Control Act (TSCA) inventory and an additional 2,000 chemicals are added annually. Each year, 1 billion pounds of active ingredients found in conventional pesticides are applied in the United States. Release of these chemicals into the environment through agricultural and nonagricultural application and other means poses serious risks to both human health and ecosystems. In FY 2003, the Agency will continue to conduct research to reduce risks associated with releases of pesticides and other toxic chemicals and improve the safety of our communities, homes, work places, and ecosystems. This research will include the development and improvement of methods to evaluate hazards on human health endpoints, models to improve the biological basis for human health risk assessment, and methods to identify ecological hazards, predict ecological risk, and characterize environmental stressor interactions.

In addition, the Agency will launch new efforts to address the risks associated with biotechnology. Biotechnology presents a wealth of opportunities from genetically engineered crops to improve productivity, provide resistance to pests and other stresses, and increase nutritional value. But concerns about potential risk and our ability to manage these risks, driven primarily by a lack of information, have created considerable public concern. The research proposed here will provide information needed to evaluate three plausible concerns: 1) potential allergenicity of proteins introduced into the food supply by engineered crops; 2) potential

adverse ecological effects on non-target species; and 3) potential development of pest resistance to the engineered crops.

Human Health Research

Humans are exposed every day to thousands of chemicals individually and/or in multiple combinations through the air, drinking water, food, and dust. The objectives of the human health research program under the Safe Communities goal are to: develop and verify methods to detect, characterize and quantify adverse human health effects that result from exposure to pesticides and other toxic substances; develop and validate models to predict the human health effects of exposure to pesticides and other toxic substances; and provide data on the health effects of selected pesticides and other toxic chemicals, occurring singly or as complex mixtures.

Health effects methods and models research in FY 2003 will continue to focus on development of mechanistically-based predictive models for human health risk assessment, such as structure-activity-relationship models to help determine testing needs under Section 5 of TSCA, which addresses the introduction of new chemicals into commerce. Research will address the needs for methods to evaluate effects associated with a variety of exposure conditions and the special sensitivities of certain subpopulations (including children) based on age, genetic factors, and health status. These methods will be used to evaluate endpoints of toxicity that are qualitatively different from those of concern for the general population.

In FY 2003, EPA will continue to participate in the Agriculture Health Study (AHS) with the National Cancer Institute (NCI), the National Institute for Environmental Health Sciences (NIEHS), and the National Institute of Occupational Safety and Health (NIOSH). The AHS is a large epidemiological study on the health of men and women in agriculture. The primary objective of the EPA exposure study is to collect high quality exposure data that can be used to evaluate how accurately the AHS questionnaire classifies pesticide application activities and enables the prediction of applicator exposure and dose. The Agency will complete sample analysis for the study and initiate data analysis in FY 2003.

The results of the application of methods developed under this research program will significantly increase understanding of the impacts of specific classes of pesticides and toxic substances on human health.

Ecological Research

Over the long term, ecosystem degradation poses one of the most serious risks to human health and economic sustainability. Our nation's ecosystems provide valuable renewable resources such as food, fiber, water storage, and wood. Stresses to the environment can impact these resources as well as critical self-purifying environmental processes. Ecosystems protection research remains a high priority due to the need for better understanding of environmental stressors and their impacts on the health and sustainability of ecosystems. The mechanisms and consequences of changes in the biological, chemical, and physical attributes of ecosystems due to stressors are poorly understood and represent significant challenges to the research community.

In FY 2003, ecosystem effects research will address: 1) the development of appropriate screening and higher tier ecological effects models; 2) the development of pharmacokinetic models to estimate/extrapolate tissue concentration of chemical agents from laboratory test organisms to wildlife species of concern, and 3) the relative influence of exposure to chemicals and other environmental agents, habitat alterations, land use, and the natural variability on sustainability of wildlife populations. Research will also develop and validate predictive models to identify and characterize ecological hazard and risk.

The exposure research program will focus on applying larger-scale risk assessment tools to pesticide and toxic substance issues, and refining existing aquatic exposure assessment models used to assess the impacts of pesticides and toxics on broader scales of ecological organization. Ecological exposure modeling research will develop and validate enhanced probabilistic exposure modules supporting large-scale ecological risk assessments. Analytical methods for chiral pesticides (i e., organic compounds that have two or more mirror image structures) will be developed and field validated.

Biotechnology Research

Biotechnology, which has applicability to both human health and ecological research, presents a wealth of opportunities from genetically engineered crops to improve productivity, provide resistance to pests and other stresses, and increase nutritional value. However, concerns about potential risk and our ability to manage these risks, driven primarily by a lack of information, have created considerable public concern. New research in FY 2003 will provide information needed to evaluate three significant concerns: 1) allergenicity; 2) potential adverse ecological effects; and 3) enhancing resistance and minimizing or preventing gene transfer.

Allergenicity research will develop models that represent human responses to food allergies and can be used to detect allergenic proteins, identify factors that influence risk, and develop hypotheses that could be tested in human clinical or epidemiologic studies. Research on natural transfer of modified genes and adverse ecological effects will develop probabilistic risk assessment models that measure and simulate gene flow from a herbicide resistant crop to non-target species that may result in herbicide resistant weeds.

Pest resistance and gene transfer research will develop conceptual tools to manage resistance in pests using Bt corn and Bt cotton as prototypes (Bt is a naturally-occurring soil-borne bacterium that is found worldwide; a unique feature of this bacterium is its production of crystal-like proteins that selectively kill specific groups of insects) - the conceptual tools will then be tested under actual field conditions. Test conditions will consist of planting engineered crops and establishing different buffering, rotation, and harvesting schemes. Strong potential exists for resistance management tools to be effective in mitigating the transfer of engineered genes to non-target species. Therefore, research to further develop these tools will be conducted to expand their application to gene transfer management and support the development of the probabilistic risk assessment models, mentioned above.

FY 2003 Change from the FY 2002 President's Budget

EPM

- (+$2,000,000) Additional funds are requested beyond the FY 2002 President's Budget request for EPA to review and make public the pending increase in toxic chemical testing information being submitted by companies under the High Production Challenge Program, and to implement the Voluntary Children's Chemical Evaluation Program and outreach efforts for the HPV Program.

- (-$3,000,000) One-year Congressional directed increase above FY 2002 President's budget request.

- (-$1,102,200, -1.3 FTE) This decrease reflects return to base levels after one-year Emergency Supplemental funding increment.

- (+$747,000, +3.4 FTE) Shift in FTE and certain overhead costs to better reflect program under GPRA.

Research

S&T

- (+$4,875,000) This new funding intiative in FY 2003 supports EPA's efforts to address the risks associated with biotechnology. Research will provide sound scientific information required to understand the benefits and the risks of using genetically engineered crops. The research will address three potential areas of risks: allergenicity, gene transfer, and pest resistance. Novel approaches (tools, methods) to assess and manage potential risks from genetically modified organisms (GMOs) will be developed, including: 1) models that represent human responses to food allergies and can be used to detect allergenic proteins; 2) probabilistic risk assessment models that measure and simulate gene flow from a herbicide resistant crop to non target species that may result in herbicide resistant weeds; and 3) conceptual tools to manage resistance in pests initially using Bt corn and Bt cotton as prototypes - subsequent to development, these tools will be tested under field conditions.

- (+$348,400, +4.0 FTE) This increase enhances EPA's effort in computational toxicology and provides additional research support to the Children's Health Research Program. This research is designed to address the need for methods to evaluate the special sensitivities of children to pesticides and other toxic chemicals. As a result, EPA advances its ability to assess and predict the human health and ecological risks from environmental exposures.

- (+$123,500, +1.0 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program office on major rules.

- (-$2,389,000, -12.0 FTE) This reduction eliminates funding for FY 2002 Congressionally-directed research.

- (-$487,500) The FY 2003 Request is $487,500 below the 2002 Enacted budget due to the Congressional Earmarks received during the appropriations process which are not included in the FY 2003 President's Request.

Annual Performance Goals and Measures

New Chemicals and Microorganisms Review

In 2003 Of the approx. 1,800 applic for new chem and microorganisms submitted by industry, ensure those marketed are safe for humans and the envir Increase proportion of commer chem that have undergone PMN review to signify they are properly managed and may be potential green altern to exist. chem

In 2002 Of the approx 1,800 applic for new chem and microorganisms submitted by industry, ensure those marketed are safe for humans and the envir Increase proportion of commer. chem that have undergone PMN review to signify they are properly managed and may be potential green altern to exist. chem

In 2001 EPA reviewed 1,770 Premanufacturing Notices. By the end of 2001, 21 percent of all chemicals in commerce had been assessed for risks

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
TSCA Pre-Manufacture Notice Reviews	1770	1800	1800	Notices
Notice of Commencements	21 0	21 6%	22 3%	NOCs (Cum)

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

Testing of Chemicals in Commerce for Endocrine Disruptor

In 2002 Standardization and validation of screening assays

In 2001 The two screening assays were not completed

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Screening Assays Completed		1		Screening assa

Baseline The non-prioritized universe of chemicals that needs to be considered for prioritization includes pesticide active ingredients, pesticide inert ingredients, chemicals on the TSCA Inventory, environmental contaminants, food additives, pharmaceuticals, cosmetics, nutritional supplements, and representative mixtures "Priority-setting" refers to the determination of priorities for entry into Tier 1 Screening

Expand Information on Toxic Substances

In 2003 Provide information and analytical tools to the public for assessing the risks posed by toxic chemicals

In 2002 Provide information and analytical tools to the public for assessing the risks posed by the release of toxic substances in communities

In 2001 Data was obtained from test plans submitted by industry for 724 chemicals already in commerce

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Provide current national risk screening information to the public	1	1		Tools
Completion of community risk identification analyses	2	2		Analyses
Number of initiated/completed risk assessments for chemicals			4	Actions
Complete EPA-HQ risk-based priority setting exercise		3		Analyses
Number of submissions using exposure assessment methods, databases, and models			80%	Submiss (cum)
Number of users of exposure assessment methods, databases and models			500	User
Establish state toxics management programs			1	Pilot Programs
Complete EPA risk-based regional office priority-setting system		5		Analyses
Complete state risk-based priority setting exercises		6		Exercises
Expand use of risk screening environmental indicators tools to other countries that adminster pollutant release and transfer registries		1		Country
P2 and Risk Management Guidance Documents		2		Docs /Manual
Training Workshops		1		Workshops

Baseline: Release of national risk screening information first occurred in FY 1999. First community risk identification analyses were completed in FY 2000. First National, Regional, and State level risk-based priority setting exercises will be completed in FY 2002 First expanded use of risk screening tool by other countries will occur in FY 2002.

Risk Screening Environmental Indicators

In 2003 Reduce by 3.0% cum. hazard-based score for chronic human health calculated for releases and transfers of toxic chemicals reported to TRI from the level calculated for the preceding year, after adjusting for changes in production indices for the manufacturing, mining, and utilities sectors.

In 2003 Reduce by 4.0% cum the risk-related score assoc with air & water release pathways for chronic human hlth calc for releases & transfers of toxic chem. rptd to TRI from the level calc. for the preceding year,after adjusting for chgs in production indices for the manuf,mining & utilities sectors

In 2002 Reduce by 1.5% annually, the hazard-based score for chronic human health calculated for releases and transfers of toxic chemicals reported to TRI from the level calculated for the preceding year, after adjusting for changes in production indices for the manufacturing, mining, and utilities sectors

In 2002 Reduce by 3 0% annually the risk-related score assoc. with air & water release pathways for chronic human hlth calc. for releases & transfers of toxic chem. rptd to TRI from the level calc. for the preceding year,after adjusting for chgs in production indices for the manuf,mining & utilities sectors

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Reduction in the year 2002 production-adjusted RSEI hazard-based score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).		1 5%	3.0%	Index
Reduction in the year 2002 production-adjusted RSEI risk-based score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).		3%	4 0%	Index

Baseline: This production-adjusted APG measure is based upon the Risk Screening Environmental Indicators (RSEI) chronic human health risk-related score which is calculated by weighting estimated surrogate doses associated with TRI releases by facilities. The data for 1995 are used as the baseline for this measure.

PBT Profiler

In 2003 Provide industry with user-friendly computerized tools that allow new chemical product alternatives to be evaluated at early stages of design process.

In 2002 Provide industry with user-friendly, computerized tools that allow new chemical product alternatives to be evaluated at early stage of design process

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of users of the PBT Profiler		50	100	Users
Number of Chemicals Profiled		500	1000	Chemicals
Number of Companies Participating in Sustainable Futures			25	Participants
Number of Self-Audited New Chemical Product Alternatives			100	Alternatives

Baseline In FY 2002 the Agency made powerful risk screening software (the P2 framework) broadly available to chemical industry, including providing regulatory relief as an incentive to drive chemical risk screening and P2 outcomes In FY 2003, the Agency will audit Premanufacture submissions to determine the number of companies participating and the total number of self-audited product alternatives

Protect from Acute Exposure to Extremely Haz. Chem

In 2003 Establish short-term exposure limits for a wide range of acutely toxic substances that are protective of general public, including children, infants the infirmed, and the elderly through the Acute Exposure Guideline Levels (AEGL) Program

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Chemicals Addressed by AEGL Program			33	Chemicals
Number of AEGL values generated that will protect workers and general public			495	Values

Baseline. Baseline is 2002; calculation methodology by addition of AEGL values (10 minute, 30 minute, 1 hour, 4 hour, and 24 hour exposure periods) and numbers of chemicals addressed

Research

Research on Commercial Chemicals and Microorganism

In 2003 Provide a strategic framework for developing an integrated suite of tools that will enhance OPPTS procedures for assessing the risks to human health and ecological systems associated with commercial chemicals, microorganisms, and genetically modified organisms.

In 2002 Develop improved methods and models to evaluate the impact of environmental stressors on human health and ecological endpoints for use in guidelines, risk assessments, and risk management strategies

In 2001 EPA produced guidance on the use of structure activity relationships, as well as data on exposure of farm applicators to agricultural pesticides to improve the characterization of health risks and reduce community exposures to environmental chemical stressors

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Guidance in the use of Structure Activity Relationships (SAR) computer technologies	1			guidance
Create searchable database from existing toxicity databases to enable researchers and risk assessors to explore structure-activity associations across toxicity endpoints of regulatory interest		1		database
Use QSAR models and animal test methods to meet regulatory objectives associated with tiered human health and ecological risk assessments of commercial chemicals.			09/30/2003	methods

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request
microorganisms, and GMOs			

Baseline: At present, standard guidelines for test methods and risk assessment methodologies to evaluate the potential risks of environmental stressors to human health and ecological systems are limited to certain endpoints and are generally non-probabilistic in nature. Improved test methods and risk assessment tools will be developed to more accurately predict and fully characterize human health and ecological risks. Improved risk management tools will also be developed that will better identify and reduce environmental exposures to human health and ecosystems.

Verification and Validation of Performance Measures

Performance Measure: TSCA Pre-manufacture Notice Reviews

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

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

QA/QC Procedures: Local Area Network (LAN) server contains confidential business information (CBI) support documents on each of the chemicals; data undergo quality assurance/quality control by EPA before being uploaded to the LAN. EPA always checks for consistency among similar chemicals in databases.

Data Quality Review: EPA reviews industry data; EPA staff scientists and contractors perform risk screenings and assessments which could lead to regulation.

Data Limitations: None known.

New/Improved Data or Systems: None planned.

Performance Measure: After reviewing submissions from companies, make screening quality health and environmental effects data publicly available for 2,800 HPV chemicals

Performance Database: EPA is developing an electronic chemical right-to-know database system, called the U.S. High Production Volume (US HPV) database, which will allow organized storage and retrieval of all available information on High Production Volume chemicals in commerce in the United States. The US HPV database will be designed to store in a systematic fashion, physical chemistry, fate, exposure, and toxicity data on listed chemicals for Agency and public use.

Data Source: Industry submits test plans and robust summaries of risk screening data in response to the voluntary HPV Challenge program or EPA promulgated test rules.

QA/QC Procedures: Data undergo quality assurance/quality control by EPA before being uploaded to the database. EPA reviews industry submissions of robust summaries of hazard data on individual chemicals and chemical categories, and test plans based on those summaries. EPA determines whether industry data adequately support the summaries and test plans. Data review does not include new information received as a result of new testing.

Data Quality Review: Review of industry data.

Data Limitations: Data are primarily hazard data, not exposure data. Data are suitable to support screening level assessments only.

New/Improved Data or Systems: Data will be integrated with other Toxic Substances Control Act (TSCA) databases into an Oracle environment.

Coordination with Other Agencies

EPA's chemical testing data provides information for the Occupational Safety and Health Administration's (OSHA) worker protection programs, the National Institute for Occupational Safety and Health (NIOSH) for research, and the Consumer Product Safety Commission (CPSC) for informing consumers about products through labels. EPA frequently consults with these agencies on project design, progress and the results of chemical testing projects.

The Endocrine Disruptor program works closely with numerous federal agencies informally and formally through the FACA subcommittee on screening and testing, notably CDC, NIEHS, and NIH.

Research

EPA is among six agencies within the Federal government that conducts intramural human and environmental health research (EPA, National Institute of Environmental Health Sciences, National Cancer Institute/National Institutes of Health, Center for Disease Control and Prevention, Food and Drug Administration, and Agency for Toxic Substances and Disease Registry). The Agency conducts research in all elements of the human health risk assessment paradigm (i.e., exposure, effects, risk assessment, and risk management), making EPA's contribution unique within the Federal government. EPA is widely recognized both nationally and internationally for its work in identifying the relationship between human health effects and exposure to environmental pollutants. Basic research on the mechanisms underlying these effects in combination with problem-driven research programs contribute significantly to the Agency's ability to fulfill its goals and objectives under several environmental mandates.

Collaborations with other Federal and international research organizations create an atmosphere in which the impact of the individual programs is strengthened and the overall positive impact on public and environmental health is significantly increased. In FY 2003, the Agency will continue its cooperation with NCI, NIEHS, and the National Institute for

Occupational Safety and Health (NIOSH) on the Agricultural Health Study, which is a study of the health of men and women in agriculture.

Statutory Authorities

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

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

Federal Food, Drug, and Cosmetic Act (FFDCA)

Research

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
Toxic Substances Control Act (TSCA)
Federal Food, Drug, and Cosmetic Act (FFDCA)

Objective: Ensure Healthier Indoor Air.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Ensure Healthier Indoor Air.	**$39,190.4**	**$39,670.1**	**$40,322.7**	**$652.6**
Environmental Program & Management	$27,363.8	$29,843.4	$30,455.1	$611.7
Science & Technology	$3,810.4	$1,686.8	$1,727.7	$40.9
State and Tribal Assistance Grants	$8,016.2	$8,139.9	$8,139.9	$0.0
Total Workyears	116.4	134.0	132.2	-1.8

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$88.8	$0.0	$0.0	$0.0
Air,State.Local and Tribal Assistance Grants. Other Air Grants	$8,139 9	$8,139.9	$8,139.9	$0 0
Children's Indoor Environments	$14,714.1	$13,287.9	$13,918.4	$630.5
Facilities Infrastructure and Operations	$0.0	$1.799.7	$1,846.2	$46.5
Indoor Environments	$9,241.9	$9,366.2	$9,307.6	($58.6)
Legal Services	$85.8	$92.8	$103.5	$10.7
Management Services and Stewardship	$141.0	$526 6	$513.2	($13.4)
Radon	$6,222.7	$6,453.0	$6,493.9	$40 9
Regional Management	$0.0	$4.0	$0.0	($4.0)

FY 2003 Request

Health Effects of Indoor Air Pollution

Research conducted by the Environmental Protection Agency (EPA) and others, beginning in the late 1970's, indicates that Americans spend about 90 percent of their time

indoors, where they are exposed to levels of pollutants that are often higher than those outdoors. As a result, indoor air pollution poses high risks to human health, especially to sensitive populations, and has been ranked among the top four environmental risks in relative risk reports issued by EPA, the Science Advisory Board, and several states. Estimates of the economic costs to the Nation of poor indoor air quality, including lost worker productivity, direct medical costs for those whose health is adversely affected, and damage to equipment and materials, are on the order of tens of billions of dollars per year (Report to Congress on Indoor Air Quality, EPA/400/1-89-001). In 2000, the National Academy of Sciences (NAS) affirmed the significance of indoor triggers of asthma and the alarming increase in asthma rates nationwide (*Clearing the Air: Asthma and Indoor Air Exposures*, (ISBN 0-309-06496-1, January 2000).

Indoor air pollutants continue to have significant impacts in our homes, schools, and workplaces:

- Nearly one in 13 school-aged children has asthma. There is substantial evidence that indoor exposures to dust mites and environmental tobacco smoke (ETS) play a significant role in triggering asthma episodes, and, in some instances, are causally linked to the development of the disease. (Institute of Medicine, National Academy of Sciences (U.S.)). Committee on the Assessment of Asthma and Indoor Air. *Clearing the Air: Asthma and Indoor Air Exposures* 2000. Washington. National Academy Press.)

- Asthma's estimated annual cost to the Nation is $11.3 billion (National Heart, Lung, and Blood Institute, (NHLBI) 1998).

- Young children are exposed to ETS in approximately 27 percent of U.S. homes, increasing their risk for asthma and causing thousands of lung infections and other diseases. (Results of a national telephone survey entitled "Radon Risk Communication and Results Study," commissioned by EPA in 1994 and 1996. EPA expects updated results in late FY 2002.)

- A 1995 report by the General Accounting Office (GAO) estimates that 9.9 million students and 570,000 teachers and school staff suffer illnesses annually due to poor indoor air quality in schools. *(School Facilities. Condition of America's Schools, Report to Congressional Requesters, U.S. General Accounting Office,* GAO/HEHS-95-61, February 1995 and *Condition of America's Public School Facilities: 199,* National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education, NCES2000-032, June 2000.)

- Radon is the second leading cause of lung cancer and is estimated to be responsible for 15,000 to 22,000 deaths per year (BEIR VI, NAS, February 1998). Nearly one out of every 15 homes is estimated to have radon concentrations above the EPA recommended action level. *(National Residential Radon Survey, 1992)*

Indoor Environments Program Strategy

EPA has two major strategies to meet its human health objective for indoor air quality:

- Increase Public Awareness

EPA raises public awareness of actual and potential indoor air risks so that individuals can take steps to reduce exposure. Outreach activities, in the form of educational literature, media campaigns, hotlines, and clearinghouse operations, provide essential information about indoor air health risks not only to the public, but to the professional and research communities as well. Underpinning EPA's outreach efforts is a strong commitment to environmental justice, community-based risk reduction, and customer service. For example, the award-winning media campaign undertaken in partnership with the Advertising Council seeks to educate people about asthma and the role that indoor environmental triggers can play in the worsening of the disease.

- Increase Partnerships

Through partnerships with non-governmental and professional entities, EPA disseminates multi-media materials encouraging individuals, schools, and industry to take action to reduce health risks in their indoor environments. In addition, EPA uses technology transfer to improve the ways in which all types of buildings, including schools, homes, and workplaces, are designed, operated, and maintained. To support these voluntary approaches, EPA incorporates the most current science available as the basis for recommending ways that people can reduce exposure to indoor contaminants.

To reach people at the local level, EPA uses assistance agreements and cooperative partnerships to collaborate with organizations such as the American Academy of Pediatrics, the Asthma and Allergy Foundation of America, the National Association of Counties, the National Association of County and City Health Officials, the National Education Association, the American Lung Association, the Consumer Federation of America Foundation, the National Environmental Health Association, and the National Council of La Raza. These partnerships allow EPA to successfully reach and educate target audiences, which include: health care providers who treat children with asthma, school personnel who manage the environments where children spend many hours each day, county and local environmental health officials, and disproportionately affected and disadvantaged populations. Through this national partner network of over 30 organizations and more than 1,000 local field affiliates, EPA leverages the personnel, expertise, and credibility of these groups to provide the tools to their target audiences, and to the general public, to make informed decisions about reducing health risks in their indoor environment.

EPA will broaden awareness and action through national organizations focused on addressing indoor asthma triggers, as well as other indoor health risks. EPA will partner with other local community-based organizations for implementation. These assistance agreements will provide maximum flexibility for states and communities to design programs that address critical indoor air quality problems, including asthma, mold contamination, and secondhand smoke in homes, in child care and school facilities, and in other residential environments. Some of the residential environments, such as multi-

family, low-income housing, may involve complex issues of control and resources. Schools may have a range of indoor environmental problems that can be addressed through community-based efforts.

Indoor Environments: Children's Health Emphasis

Asthma

Childhood asthma has been characterized by the Centers for Disease Control (CDC) as an epidemic. The number of children with asthma has more than doubled in the past 15 years. During the period 1996 - 1998, an estimated four to six million children had asthma (National Center for Health Statistics, CDC). In 1996, 210,000 hospitalizations for asthma were for children under the age of 18 (National Center for Environmental Health, CDC). From 1977 to 1995, there was a three-fold increase in the number of deaths from asthma, and each year over 10 million school days are missed due to this disease (*President's Task Force on Environmental Health Risks and Safety Risks to Children*, 1999). While there is no known cure for asthma at this time, the medical community agrees, and it is established in national guidelines, that both medical treatment and environmental management are needed to effectively control asthma. However, indoor environmental management is often not practiced and often not part of the prescription for managing asthma. EPA is targeting three primary audiences to help address indoor asthma triggers nationwide: the general public, school and child care communities, and the health care providers.

For FY 2003, EPA is integrating programs across the Agency in an effort to address the serious issue of children's environmental health in schools. The initiative, developed through the Office of Children's Health Protection, includes a cross-media component that will provide comprehensive, easily accessible information and guidance to schools on how to reduce potentially harmful exposures to pollutants in schools. It also includes components designed: to improve indoor air and reduce asthma attacks in schools; to implement integrated pest management programs in schools; and to reduce exposure to lead and mercury in schools.

In FY 2003, EPA will build on the success of its national "Indoor Air Quality (IAQ) Tools for Schools"(TfS) program and expand implementation of this program to many more schools. Adoption of EPA's low-cost/no-cost guidelines for proper operation and maintenance of school facilities results in a healthier indoor environments for all students and staff, but is of particular help to children with asthma, lessening the degree to which they are exposed to indoor asthma triggers. By increasing the number of schools where TfS indoor air quality guidelines are adopted and implemented, healthier indoor air will be provided for over a million students, staff, and faculty. The Agency will continue to promote the adoption of healthy building practices in both existing school operations and in the design and construction of new schools.

Preliminary results, based on feedback from customers, have shown schools and school districts across the Nation are reaping the benefits of improved indoor air quality by successfully implementing the IAQ TfS Kit and Program. To increase awareness of the TfS Program and promote good indoor air quality for schools, the Agency partners with various non-governmental organizations to sponsor an annual schools symposium, bringing together school officials,

nurses, teachers, facility managers, parents, and others to discuss current issues and the potential negative effect poor indoor air quality can have on our children's health. In FY 2001, the IAQ Schools Symposium attracted over 360 participants, exceeding initial projections of 250 participants.

EPA will continue to refine the IAQ TfS training materials as new information becomes available, using customer feedback gathered from school case studies. These case studies describe certain schools' experiences and processes associated with implementing good IAQ strategies and practices, including how different barriers were overcome (financial, legal, managerial, health-related, or community-related) through teamwork and a strong commitment to providing a healthy learning environment for students and staff. Results of the national survey of school operation and maintenance practices conducted in FY 2002 and information gained from EPA's uniform tracking system will be used to further shape program direction for FY 2003.

EPA also will provide funding to introduce school-based asthma education programs, such as the American Lung Association's *"Open Airways"* and the National Association of School Nurses' *"Managing Asthma Triggers: Keeping Students Healthy,"* into hundreds of additional schools nationwide, with an emphasis on reaching inner city schools with disproportionately affected populations. These programs teach students with asthma to identify and control their exposure to asthma triggers in their environment and help staff and teachers understand the steps they can take to improve their school's asthma management.

EPA will continue to conduct its national public awareness campaign to enhance the general public's understanding of indoor asthma triggers and the steps they should take to reduce their exposure. Particular attention will be focused on children with asthma, their care givers, low income adults with asthma, and members of the public who, because of their advanced age, are more vulnerable to poor indoor conditions. EPA also will provide support and direction to community organizations serving seniors and community-based asthma intervention groups that educate low-income residents about the environmental components of asthma in residential settings. These efforts are expected to increase the number of Americans educated about IAQ and to spur action on reducing exposure of children and older Americans to indoor air contaminants.

In FY 2003, the Agency will expand its existing efforts to educate affected populations about asthma and how they can identify elements in their settings that may trigger asthma episodes, and address them. Successful interventions continue to be demonstrated by a number of community-based pilot programs (e.g., National Cooperative Inner City Asthma Study, Bureau of Primary Health Care Asthma Collaborative, Centers of Excellence in Children's Environmental Health Research). Those interventions determined to be most effective will be replicated in an attempt to reach increasingly larger audiences with programs tailored to their particular needs, teaching practical skills as well as motivating behavioral change. For example, in FY 2000, the year for which data is the most complete and accurate, the Agency partnered with the Asthma and Allergy Foundation of America to educate more than 800 child-care providers on how to provide a safe and healthy environment for children with asthma and allergies. Combined, these child-care providers administered care for over 9,000 children in FY

2000. Pre- and post-tests indicate a marked improvement in participant knowledge of asthma. As a result of the training, almost 90% of the participants indicated they would make changes in the child-care setting to reduce exposures to indoor asthma triggers, with most planning multiple interventions.

EPA expects, as a result of Agency programs, 834,400 Americans will be living in healthier residential indoor environments in FY 2003. Part of meeting this goal includes the Agency expanding its successful community-based educational partnerships addressing sound indoor environmental management. For FY 2003, the Agency expects to use these partnerships to educate 122,400 people with asthma, and their care-givers, about improved indoor air quality techniques.

The Agency will continue to focus on ways to assist the health-care community to raise its awareness of, and the attention it pays to, indoor asthma triggers and their role in provoking asthma attacks in those with the disease. EPA, in conjunction with the Department of Health and Human Services (HHS), will step up its interactions with managed care organizations to help assess the effectiveness of current asthma care practices and to encourage greater emphasis on avoidance of asthma triggers, as part of a comprehensive asthma treatment regimen. Lessons learned from national and regional forums about how to better integrate medical treatment and environmental management will be a focal point of these interactions.

Environmental Tobacco Smoke

As of 1996, young children were being exposed to ETS in 27% of U.S. homes. ETS exposure increases the risk of lower respiratory tract infections such as bronchitis and pneumonia. EPA estimates that between 150,000 and 300,000 of these cases in infants and children up to 18 months of age are attributable to exposure to ETS (EPA 1992). ETS exposure is causally associated with increased risk of acute and chronic middle ear disease (WHO, 1999). Asthmatic children are especially at risk, as ETS exposure increases the number of episodes and severity of symptoms for up to a million asthmatic children *(Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders,* U.S. EPA, 1993 and National Cancer Institute, *Health Effects of Exposure to Environmental Tobacco Smoke, Monograph No. 10).* Recent studies also have suggested links between ETS exposure, sudden infant death syndrome, and low birth weight (National Cancer Institute, *Health Effects of Exposure to Environmental Tobacco Smoke, Monograph No. 10).*

To address this health risk, the Agency will pursue its multi-media campaign on ETS, with a focus on expanding participation in the "Smoke Free Homes Pledge" program, which targets the parents of young children advising them not to expose children to smoke inside the home. EPA will continue with the CDC, states, and local organizations to develop and make available tools and resources which motivate parents and guardians to make their homes smoke-free and to provide support to state and local governmental tobacco control programs to address this issue.

Indoor Environments: Homes, Schools, and Buildings Programs

EPA continues to work toward bottom line results for the Indoor Environments base programs. This includes the number of office buildings managed with good Building Air Quality practices, home radon tests completed, home radon mitigation accomplished, and new homes built with radon-resistant features. EPA provides assistance to the public; to states, Tribes, and other governmental agencies, and to non-governmental organizations to help meet the program's objective to reduce indoor environmental pollutants.

Through the State Indoor Radon Grant Program, EPA provides assistance to the states for the development and implementation of programs to assess and mitigate radon, thereby enhancing the effectiveness of state and local activities for radon risk management. The state grant program helps:

- establish the basic elements of an effective Radon Program in states that have not yet done so;
- support innovation and expansion in states that currently have programs in place; and
- strengthen the Federal/state partnership by helping states develop radon program elements and activities.

In light of changed world events, EPA received numerous requests from building and home owners asking for guidance on how to clean inside buildings, ensure safety, and determine when it is safe to re-enter buildings. EPA, in coordination with the U.S. Department of Health and Human Services (HHS), plans to continue work begun in FY 2002 to develop guidance and training for builders, building owners, managers, and designers on techniques to reduce building vulnerability and effectively respond to chemical, biological, or radiological threats.

Annual Performance Goals and Measures

Healthier Residential Indoor Air

In 2003	834,400 additional people will be living in healthier residential indoor environments.
In 2002	834,400 additional people will be living in healthier residential indoor environments
In 2001	An additional 890,000 additional people are living in healthier residential indoor environments.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
People Living in Healthier Indoor Air	890,000	834,400	834,400	People

Baseline: 1 By 2003, increase the number of people living in homes built with radon resistant features to 3,635,000 from 600,000 in 1994 (cumulative) 2 By 2003, decrease the number of children exposed to ETS from 19,500,000 in 1994 to 16,889,000 (cumulative) 3 By 2003, increase the number of people living in radon-mitigated homes to 1,625,700 from 780,000 from 1994 (cumulative) 4. By 2003, increase by 122,400 the number of people with asthma and their caregivers who are educated about indoor air asthma triggers

Healthier Indoor Air in Schools

In 2003	1,050,000 students, faculty and staff will experience improved indoor air quality in their schools
In 2002	1,228,500 students, faculty and staff will experience improved indoor air quality in their schools
In 2001	An additional 1,930,000 students, faculty and staff are experiencing improved indoor air quality in their schools.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Students/Staff Experiencing Improved IAQ in Schools	1,930,000	1,228,500	1,050,000	Students/Staff

Baseline: The nation has approximately 110,000 schools with an average of 525 students, faculty and staff occupying them for a total baseline population of 58,000,000. The IAQ "Tools for Schools" Guidance implementation began in 1997. For FY 2003, the program projects an additional 2,000 schools will implement the guidance and seeks to obtain implementation commitments from 5 of the 50 largest school districts in the U.S. with an average of 140,000 per district. (Additional, not cumulative since there is not an established baseline for good IAQ practices in schools.)

Verification and Validation of Performance Measures

Performance Measure: People Living in Radon Resistant Homes

Performance Database: Survey

Data Source: The survey is an annual sample of members of the National Association of Home Builders (NAHB), the number of homes they built, and the percent that were built radon resistant. NAHB members construct 95% of the homes built in the U.S. each year. Using a model reviewed by EPA, NAHB estimates the percentage of these homes that are built radon resistant. The percentage built radon resistant from the sample is then used to estimate what percent of all homes built nationwide are radon resistant. To calculate the number of people living in radon resistant homes, EPA assumes an average of 2.67 people per household.

QA/QC Procedures: Because data are obtained from an external organization, QA/QC procedures are not known.

Data Quality Review: N/A

Data Limitations: Because the survey sample does not include builders who are non-members of NAHB, the resulting estimate may underestimate the total number of homes built radon resistant.

New/Improved Data or Systems: None

Performance Measure: People Living in Radon Mitigated Homes

Performance Database: External

Data Source: Radon fan manufacturers report fan sales to the Agency. EPA assumes one fan per radon mitigated home and then multiplies it by the assumed average of 2.67 people per household.

QA/QC Procedures: Because data are obtained from an external organization, QA/QC procedures are not known.

Data Quality Review: N/A

Data Limitations: Reporting by radon fan manufacturers is voluntary and may underestimate the number of radon fans sold. Nevertheless, these are the best available data to determine the number of homes mitigated. There are other methods to mitigate radon including: passive mitigation techniques of sealing holes and cracks in floors and foundation walls, installing sealed covers over sump pits, installing one-way drain valves in untrapped drains, and installing static venting and ground covers in areas like crawl spaces. Because there are no data on the occurrence of these methods, again there is the possibility that the number of radon mitigated homes has been underestimated.

New/Improved Data or Systems: None

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

Performance Database: National telephone survey of a representative sample of almost 31,000 homes.

Data Source: EPA

QA/QC Procedures: Survey is designed, conducted, and analyzed in accordance with approved Agency procedures.

Data Quality Review: N/A

Data Limitations: Random digit dialing methodology is used to ensure that a representative sample of households has been contacted; however, survey is subject to inherent limitations of voluntary telephone surveys of representative samples. Limitations of phone surveys include: 1) inconsistency of interviewers following survey directions. For example, an interviewer might ask the questions incorrectly or inadvertently lead the interviewee to a response; 2) calling at an inconvenient time. For example, the respondent might not want to be interrupted at the time of the call and may resent the intrusion of the phone call. The answers will reflect this attitude.

New/Improved Data or Systems: None

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

Performance Database: Survey of representative sample of schools using commercially available and government databases of private and public schools. The survey will help determine the number of schools adopting and implementing good IAQ practices by using EPA's "Tools for Schools" kit (TfS). The survey is expected to be conducted in 2002 and results are expected in later in the year.

Data Source: EPA-developed questionnaire

QA/QC Procedures: Survey is designed, conducted, and analyzed in accordance with approved Agency procedures.

Data Quality Review: EPA will review the data for completeness and quality of responses.

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

New/Improved Data or Systems: Prior to the survey, EPA simply tracked the number of schools receiving the kit and estimated the population of the school to determine the number of students/staff experiencing improved indoor air quality. With this new survey, EPA is compiling a database to better track the number of schools that have received TfS kits as well as have adopted and implemented good IAQ practices. The database will be complete in late 2002.

Coordination with Other Agencies

EPA serves a unique role in programs related to safety, consumer products, and schools because of its experience and track record in raising public awareness of actual and potential indoor air health risks, in addition to past work on indoor air quality issues associated with consumer products, and its expertise in the areas of indoor air quality in schools. EPA also plays a lead role in the Task Force for Environmental Asthma Issues.

EPA works with Federal, state, Tribal, and local government agencies, industry, non-profit organizations, individuals as well as other Nations to promote more effective approaches to identifying and solving indoor air quality problems. EPA works with the:

- Department of Health and Human Services (HHS) to develop and conduct programs aimed at reducing children's exposure to known indoor triggers of asthma, including ETS;
- Department of Housing and Urban Development (HUD) on home safety issues, especially those affecting children;
- Consumer Product Safety Commission (CPSC) to identify and mitigate the health hazards of consumer products designed for indoor use;
- Department of Education (DoEd) to encourage construction of schools with good indoor air quality; and
- Department of Agriculture (USDA) to encourage USDA Extension Agents to conduct local projects designed to reduce risks from indoor air quality.

As Co-chair of the interagency Committee on Indoor Air Quality (CIAQ), EPA works with the CPSC, the Department of Energy, the National Institute for Occupational Safety and Health, and the Occupational Safety and Health Administration to review EPA draft publications, arrange the distribution of EPA publications and coordinate the efforts of Federal agencies with those of state and local agencies concerned with indoor air issues.

Statutory Authorities

Radon Gas and Indoor Air Quality Research Act of Title IV of the Superfund Amendments and Re-authorization Act (SARA) of 1986

Toxic Substances Control Act (TSCA), section 6, Titles II, and Title III (15 U.S.C. 2605 and 2641-2671)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Clean Air Act (CAA)

Safe Drinking Water Act (SDWA)

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

Objective: Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Facilitate Prevention, Reduction and Recycling of PBTs and Toxic Chemicals	**$41,723.8**	**$48,755.4**	**$46,115.9**	**($2,639.5)**
Environmental Program & Management	$32,405.1	$38,761.5	$36,122.0	($2,639.5)
State and Tribal Assistance Grants	$9,318.7	$9,993.9	$9,993.9	$0.0
Total Workyears	183.3	197.0	196.0	-1.0

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
ATSDR Superfund Support	$0.0	$654.3	$0.0	($654.3)
Administrative Services	$96.7	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$7,283.7	$1,700.0	$0.0	($1,700.0)
Design for the Environment	$4,965.6	$4,707.6	$4,810.7	$103.1
Facilities Infrastructure and Operations	$0.0	$2,725.9	$2,779.1	$53.2
Legal Services	$23.1	$70.2	$197.8	$127.6
Management Services and Stewardship	$77.4	$478.6	$493.4	$14.8
New Chemical Review	$1,604.3	$1,611.6	$1,606.4	($5.2)
PBTI	$2,455.1	$2,572.5	$2,580.5	$8.0
Pollution Prevention Incentive Grants to States	$5,986.3	$5,986.3	$5,986.3	$0.0
Pollution Prevention Program	$10,066.4	$9,597.8	$9,902.8	$305.0
RCRA State Grants	$3,066.2	$4,007.6	$4,007.6	$0.0
RCRA Waste Reduction	$11,689.0	$14,633.7	$13,740.7	($893.0)
Regional Management	$8.8	$9.3	$10.6	$1.3

FY 2003 Request

Pollution prevention (P2) is designed to prevent contaminants from entering the environment, in contrast to risk management and remediation, which are designed to control pollutants that have already been introduced. Under the Pollution Prevention Act of 1990 and its directive that "pollution should be prevented or reduced at the source whenever feasible," P2 and source reduction became the Agency's preferred approaches to environmental protection. Compared to approaches that control, treat, or clean up pollution, P2 can sometimes be more effective in reducing potential health and environmental risks to the extent that it may:

- reduce releases to the environment;
- reduce the need to manage pollutants;
- avoid shifting pollutants from one media (air, water, land) to another; and
- protect natural resources for future generations by cutting waste and conserving materials.

Preventing pollution can be cost-effective to industry in cases where it reduces excess raw materials and energy use. P2 can also reduce the need for expensive "end-of-pipe treatment" and disposal, and support quality improvement incentives in place at facilities. Current EPA strategies include institutionalizing preventive approaches in EPA's regulatory, operating, and compliance/enforcement programs and facilitating the adoption of pollution prevention techniques by states, Tribes, the academic community and industry. EPA uses market incentives, environmental management tools and new technologies to promote wider adoption of P2 measures.

Much progress has been made in carrying out these strategies, though more work remains. Perhaps the fastest growing opportunities 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 design. Another opportunity for building P2 practices into industrial operations lies in partnerships with the academic community. By developing and providing educational tools for universities to train the next generation of engineers, we plant the seeds needed to replicate P2 practices throughout industry.

FY 2003 Key Program Activities

In FY 2003, EPA will work to achieve the pollution prevention objective by pursuing a coordinated set of activities, tailoring programs and projects to the concerns and interests for each arena. Every type of organization and each individual consumer has a part to play in preventing pollution. P2 approaches can be flexibly applied to most endeavors. The Agency will promote effective pollution prevention through the following programs and activities:

Pollution Prevention Program

(a) Sustainable Business Practices. Businesses can sometimes reduce costs significantly by implementing effective P2 programs. Sometimes the savings are not readily apparent because of the structure of the company's internal accounting system. The Agency will play a role in

encouraging businesses to modify their management accounting systems to fully and explicitly account for environmental costs. These strategies are designed to improve the current business management framework in ways that will enable companies to more easily choose prevention practices. The Agency will develop Sustainable Business Franchises to provide corporations with a fully developed, self-sustaining module for the delivery of environmental technical assistance.

(b) Government Actions. The Agency is invested in sharing information and supporting State programs on Pollution Prevention. During FY 2003, State Program Support will include management of the Pollution Prevention Incentives for States (PPIS) grants (discussed later in this objective); P2 Results; and support of the National Pollution Prevention Roundtable. In the area of Information Sharing, EPA will continue funding the Pollution Prevention Information Clearinghouse and management of the highly successful Pollution Prevention Resource Exchange.

(c) Safer Products. EPA has the lead in implementing the Pollution Prevention Act (PPA) and in carrying out Executive Order 13101 and its predecessor, Executive Order 12873, section 503. The PPA requires EPA to "identify opportunities to use Federal procurement to encourage source reduction." These orders require the Federal government to use its purchasing power - about $200 billion in goods and services each year - to create a demand for products and services that have a reduced impact on the environment (i.e., environmentally preferable products, or EPPs). The Agency finalized guidance in 1999 to help executive agencies identify and purchase environmentally preferable products and services. In FY 2003, EPA will expand demonstration projects to include electronic products and partnership opportunities with the Department of Interior. Program activities for FY 2002 include the development of tools to assist government purchasers in making environmentally preferable purchases. Additionally, the Agency will conduct a benchmark measurement of the performance and extent to which government purchasers are actually making environmentally preferable purchases.

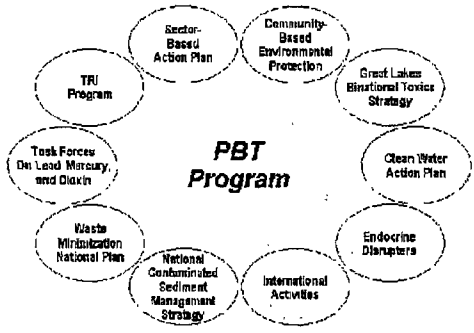
EPA is moving forward with efforts to provide information consumers can use to make environmentally friendly choices, through the use of Environmentally Preferable Products (EPP). The Consumer Labeling Initiative (CLI) is designed to improve household product labels to better present environmental, safe use, health, and other information. Proper labeling is especially important for products that are used by or around children, so that parents can evaluate potential risks to children from possible exposure to toxic chemicals. During FY 2003, the CLI program will work specifically with Federal and local governments, States, and community organizations to broaden its public outreach on *Reading the Label – First*, encouraging consumers to read the product label prior to purchase and use.

(d) PBT Program. The Agency is concerned about persistent, bioaccumulative and toxic (PBT) substances, such as mercury, dioxin, and DDT, because these pollutants persist in the environment and can build up to high concentrations in human and animal tissue. Some PBTs can cause developmental and neurological defects in fetuses and young children and some are also suspected endocrine disruptors.

Pollution Prevention Incentive Grants to States

The States are the primary sources for businesses and communities that are seeking assistance in identifying and applying prevention approaches. EPA has provided seed money to help states promote innovation and develop state capacity. The PPIS grants foster the development of new P2 approaches by providing funds to states in the areas of technical assistance and training, education and outreach, regulatory integration, demonstration projects, legislative activities and awards programs. Another key program for states, the Pollution Prevention Resource Exchange, helps to support technical assistance organizations by coordinating the development and dissemination of up-to-date information on P2 approaches.

PBT Program Connections



To address continuing issues associated with PBTs, EPA launched a cross-office, cross-media PBT program in FY 1999. Through this effort, the Agency seeks to prevent, minimize and, when possible, eliminate PBTs which are harmful to both human health and the environment. The initiative's cross-media approach is designed to stop the transfer of PBT pollutants across media using all of EPA's tools: regulatory, compliance assistance, enforcement, research, voluntary actions, prevention, and international negotiations. The PBT program fosters cross-agency collaboration on activities related to priority PBTs by building on actions by individual national program offices and regions, and by providing resources for priority PBT activities that further this agency-wide effort.

In FY 2003, the Agency will be implementing its Mercury National Action Plan, focusing on seven key priority areas. Critical measurement and monitoring efforts will be in their third year; facilities will be collecting PBT chemical release data under the new TRI rule, and submissions under TSCA for approval of new PBT chemicals for entry into commerce–these activities will be under close scrutiny. New activities for FY 2003 will include:

- Developing cross-cutting action plans for PBT monitoring and risk communication;
- Increasing the focus on regional/state implementation projects;
- Emphasizing dioxin and continuing emphasis on mercury and PCBs; and
- Reviewing the results from major measurement, monitoring and data collection efforts.

Design for the Environment and Other Programs

One of the Agency's key P2 industry sector-based programs focuses on fostering cleaner technologies and the reduction of potential risks to health and the environment through the adoption of safer chemicals and workplace practices. EPA's Design for the Environment (DfE) Program works in partnership with industry sectors to develop comparative risk, performance, and cost information about alternative technologies, chemicals, and processes to better aid industry in making environmentally-informed decisions. Through this program, EPA has entered into long-term partnerships with more than 15 industries, including printing and graphics; textile and garment care; electronics and computers; automotive manufacturing, repair, and refinishing; industrial and institutional laundries; foam furniture manufacturing; paints and coatings; and others.

DfE partnership projects support the reduction of risks to health and the environment through the development of a better understanding of workplace and environmental hazards, through identifying incentives to encourage the adoption of safer workplace practices, and through providing technical support towards the redesign of safer chemicals, mixtures, formulas, products, and technologies. DfE partnerships have begun to see changes in either the use of chemicals or workplace practices in industrial and institutional laundry product formulations, dry-cleaning and garment care, automotive refinishing practices, printing processes, and in the electronics industry.

DfE has completed comparative assessments on over 800 chemicals and continues to evaluate several hundred additional chemicals each year. The switch to alternative cleaner, safer chemistries and/or the adoption of P2 practices in the workplace can result in the reduction of the use of hazardous chemicals. These use reductions will translate into lower quantities of hazardous chemicals released, disposed of, treated, or combusted for energy recovery; contributing to the overall objective of achieving a 20 percent reduction in such quantities.

DfE's partners in the flexographic ink, electronics, and automotive refinishing industries completed the multi-year technical portion of the partnership project during FY 2001 while outreach activities continue through 2002. In 2003, DfE will investigate the feasibility of technology transfer of DfE "lessons-learned" to additional industries. For example, EPA will work with other industries that employ spray application practices and use chemicals similar to those found in the collision repair industry.

In 2003, EPA intends to continue with new DfE partnership activities launched in 2002 in the marina and the electronics industries. The new DfE electronics industry partnership focuses on life cycle impacts of lead solder and its alternatives. The continual partnership with the electronics industry and the expansion to new areas of investigation is valued by both DfE and the partners, particularly for this industry which faces rapid and continuous change. The DfE

formulator initiative will also reach new industries in 2002 and 2003. The formulator initiative will be expanded beyond the original industrial laundry sector partnership in 2001 to include cleaning products and fragrances. In 2002, DfE will begin to place greater emphasis on working with the Regional and State P2 Programs to incorporate DfE strategies and goals into regional-based projects. The DfE Program will maintain a leadership role but will serve more as a technical and communications guide to regional and state partners. DfE will look to the Regional and State P2 programs to identify critical areas of concern and opportunities for integrating DfE concepts. The DfE Program will promote the use of its approaches including, substitutes assessment, life cycle analysis, best management practices and EMS sector strategies. The DfE program will pilot a stronger Regional program in FY 2002 through collaborative projects with EPA Regions 6 and 9.

The focus of the Green Engineering Program (GE) is on education. Green Engineering aims to educate senior-level undergraduates as well as graduate students in engineering to build P2 principles into the design and operation of industrial processes. EPA has developed a Green Engineering textbook and other educational materials. Several schools have already used the draft manuscript in their classes as a primary textbook. EPA is working with the American Society of Engineering Education (ASEE) to further disseminate GE information to engineering schools. In 2002, there will be Green Engineering Tract at the Summer American Society of Engineering Education (ASEE) Conference.

The Buy Clean program applies Environmentally Preferable Purchasing principles to indoor environmental quality, with an emphasis on its potential to reduce risk to schoolchildren from exposure to indoor air pollutants. In 2002, EPA will fully implement the one-year pilot grant program to test Buy Clean in schools across the country. In 2003, EPA will finalize and distribute the case studies from the pilot Buy Clean projects and recognize the accomplishments of the schools which participated in the pilot.

The pollution prevention approaches discussed above are intended to provide assistance and incentives to various sectors of society to promote new habits and new ways of doing business that are sustainable, cost-effective and beneficial to the environment. These activities can promote greater ecological efficiency and therefore help to reduce the generation and release of production-related waste.

Green Chemistry

The Pollution Prevention Act not only established a national policy to prevent or reduce pollution at its source, it also provided an opportunity to expand beyond traditional EPA programs and devise creative new strategies to protect human health and the environment. Green chemistry, or the design of chemical products and processes that eliminate or reduce the use or generation of hazardous substances, is a highly effective approach to pollution prevention because it applies innovative and cost-effective scientific solutions to real-world environmental problems, all through voluntary partnerships.

The goal of the Green Chemistry Program is to promote the research, development, and implementation of innovative chemical technologies that eliminate or reduce hazardous

substances during the design, manufacture, and use of chemical products and processes. More specifically, the Green Chemistry Program supports fundamental research in the area of environmentally benign chemistry as well as a variety of educational activities, international activities, conferences and meetings, and tool development. Green Chemistry partners include industry, trade organizations, academia, scientific societies, and other state and federal government organizations.

The Green Chemistry Challenge Program continues to be effective at catalyzing the behavioral change necessary to drive the research, development, and implementation of green chemistry technologies. In addition, this program also continues to provide an opportunity to quantitatively demonstrate the technical, environmental, and economic benefits that green chemistry technologies offer. In recent years, the program has made significant progress in several areas including 1) broad, competitive, non-target research efforts, 2) education activities, 3) recognition efforts, and 4) international initiatives. In 2003, the Green Chemistry Program will also be focusing its outreach, awards, and research efforts to target 1) audiences not currently involved in green chemistry product and process design and 2) specific high priority chemicals, products, and/or processes for which safer alternatives are not available.

Resource Conservation and Recovery Program

Pollution prevention and safe recycling are two of the nation's best tools for environmental protection. Well implemented, systematic source reduction and recycling programs solve waste management problems at their source, lowering pressure on the environment and reducing energy use at a number of critical points - production of raw materials, subsequent processing into finished products, and eventual transport and disposal at a waste management facility. At the same time, the best programs save industry and government money.

The Resource Conservation and Recovery Act (RCRA) directs EPA to promote a reduction in the amount of waste generated and to improve recovery and conservation of materials through recycling. The RCRA program emphasizes a national policy focusing on a hierarchy of waste management options that advocates source reduction, reuse and recycling over treatment and disposal. In the 1990 Pollution Prevention Act, Congress codified this hierarchy of waste management options, reaffirming the need for source reduction and recycling programs for both hazardous and municipal solid wastes.

The waste reduction activities in this objective include:

- fostering partnerships with states;
- working with Tribes and local communities;
- carrying out plans to reduce toxic chemicals in industrial hazardous waste streams;
- defining techniques to reduce the generation of municipal, hazardous and other solid waste through pollution prevention;
- and developing methods to increase hazardous and municipal solid waste recycling.

In the hazardous waste arena, the Agency complements its regulatory control program with a strong emphasis on developing waste minimization partnerships with industry to reduce the generation of wastes that are most harmful to human health and environment. The RCRA program will find ways to reduce the presence of chemicals of concern in waste by emphasizing voluntary partnerships with states, industry and communities.

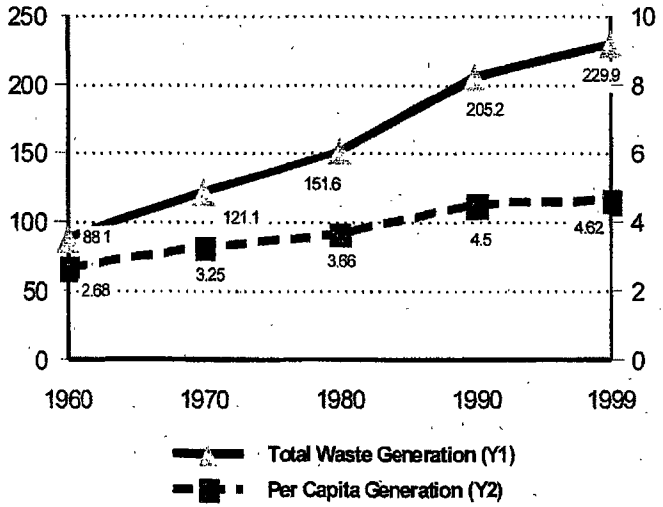
In FY 2003, EPA will focus its efforts on the implementation stage of its program to reduce hazardous wastes containing priority chemicals. EPA will sponsor industry workshops, encourage increased technical assistance and information sharing, and publicly recognize industry leaders. For example, EPA is exploring a partnership with the primary aluminum industry to work towards mutual goals of waste and energy reductions. Regional and state staffs will encourage partners and aid in identifying waste minimization goals and avenues for achieving them cost-effectively.

EPA will continue to respond to court decisions concerning its jurisdiction over recycling secondary materials in FY 2003. As part of this effort, the Agency will be working toward removing regulatory barriers to safe hazardous waste and materials recycling and promoting ways to improve and encourage recycling. This effort will consider both regulatory changes and non-regulatory approaches.

In FY 2003, the Agency will investigate further opportunities to increase the rate of hazardous waste recycling. This exploration will include Regional and state collaboration to clarify or revise existing policy related to recycling. EPA will also work with industry to test alternative regulatory requirements that promote recycling, such as revising the regulations governing metal finishing sludges. EPA expects state partners to implement projects through a process developed jointly by Environmental Council of States (ECOS) and EPA, as demonstrated by the Region III states' electronics recycling project. These projects are likely to focus on testing alternatives to current regulations that show promise for increasing recycling without compromising human health and the environment. EPA also expects to collaborate with partners in various regulated sectors, such as, academic research institutions, to revise regulations and policies to encourage environmental stewardship and reduce hazardous waste generation.

In addition, the Agency remains committed to reducing regulatory burden. In FY 2003, EPA plans to promulgate rule changes that will reduce the paperwork burden associated with the RCRA program and further streamline RCRA data collection. Every two years, EPA and forty-nine states and territories must use the Biennial Reporting System (BRS) to interact with 20,000 entities for collection of basic information on waste generation and management, in accordance with RCRA Section 3002. BRS costs implementing agencies an aggregate of $7.7 million, and imposes 195,000 hours of burden and $10 million in cost annually on the regulated community. Currently, changes have been incorporated to facilitate electronic data submissions and to simplify the BRS forms. In FY 2003, EPA and its state partners will explore the cost effectiveness of alternatives to BRS, such as integrating regulatory requirements with firms' existing operational and financial data systems, increasing reliance on data from the Toxics Release Inventory, and conducting periodic surveys of the largest hazardous waste generators in lieu of the entire BRS.

Figure ES-1: Waste Generation Rates From 1960 to 1999



Waste reduction has clear benefits in combating the ever-growing stream of municipal solid waste (MSW). Annual generation of MSW grew steadily from 88 million to 230 million tons between 1960 and 1999. MSW includes waste generated from residences, commercial establishments, institutions, and industrial non-process operations. EPA's municipal solid waste program provides national leadership, technical assistance and outreach for businesses, industry, and municipalities implementing source reduction and recycling systems in their plants, facilities and communities. This also includes states and Tribes whose laws provide the structure for these activities. The program implements a coordinated set of strategies to manage wastes, including source reduction (also called waste prevention), recycling (including composting), combustion, and landfilling. Preference is given to strategies that maximize the diversion of waste from disposal facilities, with source reduction (including reuse) as the highest priority, followed by recycling.

In support of EPA's retail theme, the Agency plans to increase consumer and individual awareness of environmental issues by initiating an environment retail effort in FY 2003. Although the focus is on the "point of purchase", the retail initiative will target consumer products such as compact disks (CDs), as well as company systems and industrial processes. By

focusing on a product, EPA can then direct the consumers' attention to product stewardship, design, materials use, supply chains and encourage reuse/remanufacturing/recycling when a product has reached its useful life. In FY 2003, the Agency will be well on the way in to making substantial progress with our governmental and business partners in voluntary negotiations to increase the recovery of end-of-life electronic products. Participants in an EPA supported series of voluntary discussions involving electronics manufacturers, recyclers, retailers, states and local governments and non-governmental organizations will develop national solutions for increasing the rate of electronic product recycling. EPA will support pilot programs that further the e-recycler initiative. In FY 2003, EPA will sponsor a series of regional pilot projects to test and gather data on various approaches to collect used electronics, and will work with manufacturers in the design stage to improve the environmental performance of their products. In addition, the Agency will aid the implementation of new national collection initiatives, launched as a result of prior year product stewardship dialogs; document and disseminate results from the many electronics pilots currently underway; coordinate with many international electronic initiatives; and spearhead more aggressive Federal green procurement and contracting for electronics.

There is a need to ensure that recovery is performed in a safe and environmentally sound manner as electronic products become more routinely reused and recycled. In FY 2002, EPA worked with the Organization for Economic Cooperation and Development (OECD) to develop draft guidance identifying safe practices for dismantling and recycling end-of-life electronics. In FY 2003, the Agency will also continue efforts to develop and update guidance for safe, effective recycling of these materials. Since many of the markets for used electronic materials are international, EPA will continue to work with OECD on environmentally sound methods for recycling used electronics.

In FY 2003, the Agency will continue to partner with government agencies, Tribes, non-profit organizations, business, and industry to advance toward the national goal of 35 percent municipal solid waste recycling by FY 2005. The Agency will share technical information through satellite broadcast forums, workshops, training, and outreach materials. These efforts will help local governments assess progress by applying EPA's Source Reduction Measurement Methodology and establish equitable and fair "Pay-As-You-Throw" fee systems for solid waste services. The Agency will participate in voluntary programs like WasteWise and engage in discussions with business, industry, and government agencies, to show them how they can help achieve the national recycling goal. EPA will focus on materials that are difficult to recycle and materials that are generated in large quantities including construction and demolition debris, electronics, food waste, tires, plastics and carpet.

In FY 2003, WasteWise will emphasize new initiatives to encourage partners to consider (1) innovative alternatives to traditional disposal contracting, such as "Resource Management," an approach pioneered by General Motors, which strengthens economic incentives for waste reduction and resource efficiency while saving money, and (2) "Green Building" approaches to building construction and demolition, which reduce waste and boost recycling. Additionally, the WasteWise program will seek additional federal sector partners to promote source reduction, recycling and buy-recycled programs. EPA expects dozens of additional partners as a result of increased compliance with RCRA §6002, which requires federal agencies to buy products made

with recycled content. Regional staff will recruit new partners and will provide technical assistance to them.

The WasteWise Federal sector focus supplements EPA's issuance of additional Comprehensive Procurement Guidelines (CPG), which establish guidelines for Federal and state purchasing, that help improve the market for products made from materials recovered from the solid waste stream. These efforts foster implementation of Executive Order 13101, which requires Federal agencies to reduce waste, reuse materials and recycle. Currently, the CPG lists over 50 products, such as industrial drums, carpet cushion and park benches and soon government agencies might find themselves purchasing recycled content office furniture, roofing materials and nylon carpet, among other items. Continuing advancements in technology development will increase the number and quality of recycled content products in the CPG.

One effort that has built momentum both internationally and domestically is *Extended Product Responsibility* (EPR). By engaging in discussion with product manufacturers, EPA encourages them to evaluate the life cycle impacts of their product so that product design and manufacturing can be modified to reduce impacts on the environment. In FY 2003, the Agency will encourage product manufacturers to determine what their appropriate role is in the recycling of their products at end-of-life. EPA has witnessed substantial engagement by electronics and carpet manufacturers in voluntary EPR discussions this past year. For example, EPA, the carpet industry's trade association, major manufacturers, as well as participating state and regional governments signed a Memorandum of Understanding that 1) establishes a dramatic new national goal for recovery of used carpets; 2) creates a new industry-funded organization to support the development of recycling infrastructure, and; 3) provides for government procurement and market development initiatives to support this undertaking. EPR is a broad-reaching environmental principle that will complement environmental programs across the Agency.

EPA will work closely with the network of state and Tribal recycling and economic development officials created through our Jobs Through Recycling (JTR) program. This program has provided significant assistance to entrepreneurs creating or expanding recycling businesses throughout the country. During FY 2003, the JTR program will continue to help quantify and communicate the employment and financial impacts of recycling businesses.

FY 2003 Change from the FY 2002 Enacted

EPM

- (-$2,950,00) The FY 2003 request is $2,950,00 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

Annual Performance Goals and Measures

Green Chemistry Challenge Awards

In 2003	Continue to stimulate development of new safe ("green") chemicals and safe chemical processes through public recognition for outstanding achievements in this field

In 2002 Continue to stimulate development of new safe ("green") chemicals and safe chemical processes through public recognition for outstanding achievements in this field

In 2001 The program received information on a total of 75 processes/products

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Alternative feed stocks, processes, or safer products identified through Green Chemistry Challenge Award	75	110	160	Prod/proc (cum)

Baseline Baseline is zero in FY 2000

Toxic Release Inventory (TRI) Pollutants Released

In 2003 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2003, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2002 This data will be reported in 2005

In 2002 The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2002, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2001 This data will be reported in 2004

In 2001 No conclusions can be drawn regarding changes in TRI Non-recycled wastes from calendar year 2000 to calendar year 2001 without data

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Reduction of TRI non-recycled waste (normalized)	not available	200 Million	200 Million	lbs

Baseline This APG measures changes in TRI Non-Recycled Wastes TRI data are reported to EPA by facilities by July 02, and compiled and reported publically by EPA in Spring 03 EPA will do an analysis to determine a new target

Managing PBT Chemicals

In 2003 Initiate further actions pursuant to PBT Strategy and Level I PBT National Action Plans including a plan to address unique environmental health threats to Tribes and special populations

In 2002 Initiate further actions pursuant to PBT Strategy and Level I PBT National Action Plans including a plan to address unique environmental health threats to Tribes and special populations

In 2001 15 new PBT prevention / reduction projects initiated through regional offices in 2001. The list of additional priority PBTs was not published

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of prevention and reduction Regional projects initiated	25	35	45	Grants (Cum)
Publish final list of additional priority PBTs.	0			List
Hospital Mercury Project		200	100	Participants
Number of New Multiple-PBT Strategies Completed		2		Strategies
Tribal PBT Actions			4	Grants

Baseline Level II chemicals: For PBT risk reduction projects, the baseline is zero projects in FY 1999. Final List of Priority PBTs. The baseline for hospital mercury project is under development. The baseline for number of new multiple-PBT strategies completed is zero in 2001

Safer Alternative Cleaning Technologies

In 2003 Expand the use of cleaner technologies in priority industries, including reduction in the use of perchloroethylene from 1997 levels

In 2002 Expand P2 practices in the garment care industries by achieving a reduction in the use of perchloroethylene by the dry-cleaning industry from the 1997 levels.

In 2002 Expand the use of cleaner technologies in priority industries.

In 2001 EPA continued to work with industry on reducing the use of the highly toxic chemical perchloroethylene in the dry cleaning industry

In 2001 The market share for cleaner inks is 6 percent. The market share for cleaner adhesives increased to 65%. In FY2001 EPA established partnerships with 8 detergent formulation industry entities, including 15 formulations

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
For inks, track size of flexographic ink industry and market share ($ and lbs) of cleaner inks	6%	15% (cum)	15% (cum)	Market share
For adhesives, track size of cleaner adhesive industry market share.	65%	70% (cum)	70% (cum)	Market Share
For eco-friendly detergents, track the number of laundry detergent formulator industry partners	18	12	12	Partners (cum)
Perchloroethylene reduction	not available	38%	40%	Use Reduct cum
Regional project to expand the use of cleaner technologies		15	20%	Projects (cum)

Baseline In 1997, 83 million pounds perchloroethylene (perc) used, in 1998, 72 million pounds of perc used; in 1999, 63 million pounds of perc used

Eco-friendly detergents baseline is 1997: 0 partners and 0 detergents. The adhesives baseline is 1997 which reflects the beginning of tracking market share -- the measure is the increase in market share from the baseline. Baseline for flexographic inks measure is 1998 which reflects the beginning of tracking market share

Reducing PBTs in Hazardous Waste Streams

In 2003 Reduce waste minimization priority list chemicals in hazardous waste streams by 43% to 86 million pounds by expanding the use of state and industry partnerships and Regional pilots

In 2002 Reduce waste minimization priority list chemicals in hazardous waste streams by 40% to 91 million pounds by expanding the use of state and industry partnerships and Regional pilots

In 2001 A draft trends report that shows changes from 1991 to 2000 was prepared in FY 2001 and is currently undergoing intergovernmental review.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Prepare a trends report that shows Toxic Release Inventory changes from 1991 to 1998	1			report
Reduction in generation of priority list chemicals from 1991 levels.		40	43	percent

Baseline: 1991 Toxic Release Inventory data will be used to determine reductions

Municipal Solid Waste Source Reduction

In 2003 Divert an additional 1% (for a cumulative total of 32% or 74 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day

In 2002 Divert an additional 1% (for a cumulative total of 31% or 69 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day

In 2001 FY 2001 data is not available for the diversion of municipal solid waste from land filling and combustion or maintaining per capita generation of RCRA municipal solid waste Analysis of FY 2001 data is anticipated by September 2003

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Millions of tons of municipal solid waste diverted	not available	69	74	million tons
Daily per capita generation of municipal solid waste.	not available	4 5	4.5	lbs MSW

Baseline 1990 levels established at 17% of MSW diverted and 4 3 pounds MSW per capita daily generation

Verification and Validation of Performance Measures

Performance Measure: The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2003, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2002. This data will be reported in 2005.

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

Data Source: Regulated facilities report facility-specific, chemical-specific release reports and recycling data to EPA. For example, in calendar year 1999, 22,639 facilities filed 84,068 TRI reports.

QA/QC Procedures: Most facilities use EPA certified automated Toxics Release Inventory (TRI) FORM R reporting tools, which contains automated error checking mechanisms. Upon receipt of facility reports, EPA conducts automated edits, error checks, data scrubs, corrections and normalization during data entry and subsequent processing to verify that the information provided by the facilities is correctly entered in TRIM. The Agency does not control the quality of the data submitted by the regulated community. EPA does, however, work with the regulated community to improve the quality of their estimates.

Data Quality Review: The quality of the data contained in the TRI chemical reports is dependent upon the quality of the data that the reporting facility uses to estimate its releases and other waste management quantities. GAO Report, Environmental Protection: EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention (GAO - 01 - 283), recommends that EPA improve its rule on reporting of toxic releases to improve reporting on source reduction activities. Although EPA agrees that source reduction data is valuable, the Agency has not finalized regulations to improve reporting of source reduction activities by TRI-regulated facilities.

Data Limitations: Use of the data should be based on the user's understanding that the Agency does not have direct assurance of the accuracy of the facilities' measurement and reporting processes. TRI release data are reported by facilities on a good faith, best estimate basis. EPA does not have the resources to conduct on-site validation of each facility's reporting data, though on-site investigations do occur each year at a subset of reporting facilities.

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

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

Performance Database: Data is provided by the Department of Commerce. EPA does not maintain a database for this information.

Data Source: The baseline numbers for municipal solid waste source reduction and recycling are developed using a materials flow methodology employing data largely from the Department of Commerce and described in the EPA report titled "Characterization of Municipal Solid Waste in the United States." The Department of Commerce collects solid waste generation and recycling rate data from various industries.

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

Data Quality Review: The report, including the baseline numbers and annual rates of recycling and per capita municipal solid waste generation, is widely accepted among experts. There are various assumptions factored into the analysis to develop progress on each measure.

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

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

Coordination with Other Agencies

This objective spans a broad range of pollution prevention activities, which can yield reductions in waste generation in both the public and private sectors. For example, the Environmentally Preferable Product initiative, which implements Executive Orders 12873 and 13101, is promoting the use of cleaner products by federal agencies, which may stimulate demand for the development of such products by industry.

This effort includes a number of demonstration projects with other federal departments/agencies, such as the General Services Administration (use of safer products for indoor painting and cleaning), Department of Defense (use of safer paving materials for parking lots), and Defense Logistics Agency (safer solvents). The program also works with the National

Institute of Standards and Technology, the International Standards Organization, and other groups to develop standards for Environmental Management Systems.

In addition to business, industry and other non-governmental organizations, EPA will work with Federal, State, Tribal, and local governments to encourage reduced generation of waste as well as the safe recycling of wastes. Frequently, successful projects require multiple partners to address the multi-media nature of effective source reduction and recycling programs. The Agency has brought together a range of stakeholders to examine alternatives in specific industrial sectors, and several regulatory changes have followed which encourage hazardous waste recycling. Partners in this effort include the Environmental Council of States, the Tribal Association on Solid Waste and Emergency Response, and the Association of State and Territorial Solid Waste Management Officials.

As Federal partners, EPA and the U.S. Postal Service (USPS) work together on several municipal solid waste projects. For instance, rather than dispose of returned or unwanted mail, EPA and the USPS developed and implemented successful recycling procedures and markets, including the return of unwanted mail (advertisements, catalogues, etc.) to the Post Office for recycling rather than disposal by the recipient. In addition, EPA Regional offices have provided significant assistance to the National Park Service to implement Integrated Solid Waste Management Plans at parks in western states. EPA also works with the Small Business Administration to provide support to recycling businesses.

EPA has worked with the Council on Environmental Quality (CEQ) and the Federal Environmental Executive (FEE) to reinvigorate Federal leadership for sustainable recycling. In particular, the Agency is currently engaged with the Department of Defense, Department of Education, USPS, Department of Energy, the FEE, and other agencies to foster proper management of surplus electronics equipment, with a preference for reuse and recycling. With these agencies, and in cooperation with the electronics industry, EPA participated in developing a draft interagency memorandum of understanding (MOU) which will lead to increased reuse and recycling of an array of computers and other electronics hardware used by civilian and military agencies. Implementation of this MOU will divert substantial quantities of plastic, glass, lead, mercury, silver, and other materials from disposal.

Statutory Authorities

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

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

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

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

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

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

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k) Solid Waste Disposal Act as amended by the Hazardous Waste Amendments of 1984

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

Objective: Assess Conditions in Indian Country

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Assess Conditions in Indian Country	**$66,653.2**	**$65,436.6**	**$70,909.4**	**$5,472.8**
Environmental Program & Management	$11,372.3	$12,966.9	$13,439.7	$472.8
State and Tribal Assistance Grants	$55,280.9	$52,469.7	$57,469.7	$5,000.0
Total Workyears	85.6	90.8	90.7	-0.1

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$47.4	$0.0	$0.0	$0.0
American Indian Environmental Office	$10,014.8	$9,911.6	$10,219.7	$308.1
Facilities Infrastructure and Operations	$0.0	$1,165.4	$1,250.3	$84.9
Legal Services	$1,370.1	$1,383.0	$1,428.7	$45.7
Management Services and Stewardship	$401.8	$426.9	$475.5	$48.6
Regional Management	$53.9	$80.0	$65.5	($14.5)
Tribal General Assistance Grants	$52,469.7	$52,469.7	$57,469.7	$5,000.0

FY 2003 Request

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

assistance, assure effective communication with Tribes, allow flexibility in grant programs, and provide resources for Tribal operations.

A lack of comprehensive environmental data severely impacts our ability to properly identify risk to human health and the environment in Indian country. Progress toward building Tribal and EPA infrastructure and completing a documented baseline assessment of environmental conditions continues to be a major focus for the Agency and Tribes. These baseline assessments will provide a blueprint for planning future activities through the development of Tribal/EPA Environmental Agreements (TEAs) or similar Tribal environmental plans to address and support priority environmental multi-media concerns in Indian country.

Under the authority of the Indian Environmental General Assistance Program (GAP) Act of 1992, EPA provides grants to Tribal governments and intertribal consortia for developing the capacity to administer multi-media environmental protection programs. In 2003, EPA is requesting $57.5 million toward the Indian General Assistance Program goal of establishing a minimal environmental presence for all Federally recognized Tribes and intertribal consortia. These resources will allow most Tribes to support at least one of two persons working in their community to build a strong, sustainable environment for the future. Approximately 400 or 70% of the federally recognized tribes are funded with GAP funds; these additional funds will allow approximately 45 additional Tribes to establish an environmental presence. The vital work performed by these key people is to: assess the status of a Tribe's environmental condition, build an environmental program tailored to the Tribe's needs, develop environmental education programs and solid waste management plans, assist in the building of Tribal environmental capacity, and alert EPA to serious conditions involving immediate public health and ecological threats.

The EPA has strived to work effectively with Indian Tribes since before the promulgation of its formal Indian Policy in 1984. Vital to that policy are the principles that the Agency has a government-to-government relationship with Tribes and that "EPA recognizes Tribes as the primary parties for setting standards, making environmental policy decisions and managing programs for reservations, consistent with agency standards and regulations." To that end, EPA "encourage[s] and assist[s] Tribes in assuming regulatory and program management responsibilities," primarily through its Treatment in the Same Manner as a State (TAS) process under several environmental statutes.

EPA's policy has been and will continue to be that Tribes develop the capability to implement federal programs themselves. However, in working with Tribes, EPA has realized that TAS does not suit the needs of all Tribes. Some Tribes with acute pollution sources and other environmental problems may be too small to support a fully delegated or approved environmental programs. Other Tribes are wary of seeking TAS status because it may lead to costly litigation that may in turn lead to a diminishment of Tribal sovereignty. As a result few Tribes have sought TAS under EPA's various regulatory programs. In the absence of EPA-approved Tribal programs, EPA generally faces practical challenges in implementing the federal programs in Indian country. EPA will continue to encourage and work with Tribes to develop their capability to implement Federal environmental programs.

In accordance with EPA's longstanding policy, EPA is considering additional approaches for how EPA and Indian Tribes might work together to protect public health and the environment in Indian country. As part of that effort, EPA is again proposing language for inclusion in the President's budget that would allow EPA to award cooperative agreements to federally recognized Indian Tribes or qualified Intertribal consortia to assist the Administrator in implementing federal environmental programs for Indian Tribes. These cooperative agreements would be made notwithstanding the Federal Grant and Cooperative Agreement Act requirements that federal agencies use a contract when the principal purpose of a transaction is to acquire services for the direct benefit or use of the United States. Cooperative agreements, rather than a contract under the federal acquisition regulation, are the preferred funding mechanism, since they better reflect the government-to-government relationship. These cooperative agreements would not be awarded using funds designated for State financial assistance agreements.

The proposed language would promote Tribal participation when EPA is directly implementing federal environmental programs in Indian country or for Tribes. It would also help Tribes build the capacity to achieve TAS status if they wish to do so. While EPA would retain final decision-making authority and ultimate responsibility for all regulatory activities where EPA directly implements federal programs, the proposed language would allow for varying degrees of Tribal involvement in assisting EPA in carrying out the federal program depending upon a Tribe's interest and ability in carrying out specific work. Some Tribes might perform much of the work for EPA necessary to develop and carry out federal environmental programs. Other Tribes might gradually increase their involvement as their capacity to assist EPA increases over time. In this way, the proposed language would improve environmental protection while also building the capacity and expertise of the Tribes to run their own environmental programs. In the near future EPA plans to explore ways to provide Tribes with incentives to develop their capacity to implement Federal environmental programs.

FY 2003 Change from FY 2002

STAG

- (+$5,000,000) This increase in Indian General Assistance Program grants supports the Indian General Assistance Program goal of establishing a minimum environmental presence for all Federally recognized Tribes and inter-tribal consortia which will help to improve the targeting of other EPA assistance.

Annual Performance Goals and Measures

Tribal Environmental Baseline/Environmental Priori

In 2003	In 2003, AIEO will evaluate non-Federal sources of environmental data pertaining to conditions in Indian Country to enrich the Tribal Baseline Assessment Project
In 2002	Baseline environmental information will be collected for 38% of Tribes (covering 50% of Indian Country)
In 2001	Baseline environmental assessments were collected for 207 Tribes

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Environmental assessments for Tribes (cumulative)	207	286		Tribes, etc.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
Non-federal sources of environmental data pertaining to conditions in Indian Country				20	Data sources

Baseline: There are 572 tribal entities that are eligible for GAP program funding. These entities are the ones for which environmental assessments of their lands will be conducted

Verification and Validation of Performance Measures

Performance Measure: Non-federal sources of environment data pertaining to conditions in Indian Country

Performance Database: The American Indian Environmental Office (AIEO) Tribal Information Management System (TIMS) is used to access Baseline Assessment Project environmental information on federally recognized Indian Tribes. TIMS draws together environmental information on Tribes from existing EPA databases, such as those from media program offices, EPA Regions, as well as databases from other federal agencies. The data is accessible and can be queried by Tribe, by state, by EPA Region, or nationally. Information can be displayed in several manners including graphically on an electronic map of tribal reservation boundaries. TIMS also contains a narrative profile description by Tribe of environmental information and management activities.

Data Source. Current TIMS' data sources are existing federal databases, both from EPA and other agencies, supplemented by data sources collected from the EPA regions as appropriate. All data sources are identified and referenced in the TIMS application. In FY 2003, AIEO will analyze data from 20 non-federal data sources for enrichment the Tribal Baseline Assessment Project. Those data sources found to have an enrichment benefit by supplementing, complementing, or adding value to the federal data sources will be integrated into TIMS.

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

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

Data Limitations. Data limitations appearing in the Tribal profiles is subject to the underlying existing database systems referenced.

Coordination with Other Agencies

Solid Waste Interagency Workgroup

EPA and a large number of Agencies including the Bureau of Indian Affairs, the Indian Health Service, the Federal Aviation Administration, the National Oceanic and Atmospheric Administration, and the Departments of Housing and Urban Development, Agriculture (Forest

Service and Rural Utilities Service), and Defense are working collaboratively to identify, prioritize and close solid waste dumps in Indian country. The Group is focusing on 146 of the highest priority sites from the Indian Health Service's 1997 Report to Congress, entitled "Open Dumps on Indian Lands," which contains an inventory of 1,162 open dumps in Indian country. Additional agencies are likely to participate as the workgroup further defines its goals and strategy.

Other Examples of Interagency Coordination

EPA and the Department of Interior are coordinating an Interagency Tribal Information Steering Committee which includes the Bureau of Reclamation, Department of Energy, Department of Housing and Urban Development, U.S. Geological Survey, Federal Geographic Data Committee, Bureau of Indian Affairs, Indian Health Service, Department of the Treasury, and Department of Justice. This Interagency effort is aimed to coordinate the exchange of selected sets of environmental, resource, and programmatic information pertaining to Indian country among federal agencies in a "dynamic" information management system that is continuously and automatically updated and refreshed, to be shared equally among partners and other constituents.

Under a two- party Interagency agreement, EPA works extensively with the Indian Health Service to cooperatively address the drinking water and wastewater infrastructure needs of Indian Tribes.

Statutory Authorities

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

Goal 5: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response V-1
Control Risks from Contaminated Sites and Respond to Emergencies V-15
Regulate Facilities to Prevent Releases V-61

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, restore them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response	**$1,685,622.1**	**$1,562,983.8**	**$1,711,279.8**	**$148,296.0**
Control Risks from Contaminated Sites and Respond to Emergencies	$1,524,914.9	$1,397,140.9	$1,544,018.6	$146,877.7
Regulate Facilities to Prevent Releases	$160,707.2	$165,842.9	$167,261.2	$1,418.3
Total Workyears	4,316.4	4,388.5	4,498.7	110.2

Background and Context

Improper management of wastes can lead to serious health threats due to contamination of air, soil, and water, and as a result of fires and explosions. Likewise, improper waste management and disposal can pose threats to those living in nearby communities and can result in costly cleanups. One of the Agency's strategic goals is to ensure proper waste management and disposal to protect human health, endangered wildlife, vegetation, and natural resources from unacceptable risk posed by solid and hazardous wastes. In FY 2003, EPA will continue to promote safe waste storage, treatment, and disposal, cleanup active and inactive waste disposal sites, and prevent the release of oil and chemicals, including radioactive waste, into the environment.

Means and Strategy

EPA and its partners will continue their efforts to achieve this goal by promoting better waste management, cleaning up contaminated waste sites, and preventing waste-related or industrial accidents. To date, EPA and its partners have made significant progress toward achieving its two primary objectives that address human health and the environment at thousands of Superfund, Brownfields, Resource Conservation and Recovery Act (RCRA), underground storage tank (UST), and oil sites. Brought together by our common interest to protect our health, environment, and livelihoods, EPA and its partners have established an effective structure to manage the nation's

hazardous and solid wastes.

To achieve this goal, EPA seeks to further reduce or control the unacceptable risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. In partnership with states, tribal governments, the public, and other stakeholders, EPA will reduce or control the risks to human health and the environment at thousands of Superfund, Brownfields, RCRA, and UST sites. EPA's strategy is to apply the fastest, most effective waste management and cleanup methods available, while involving affected communities in the decision making process. The Agency will employ enforcement efforts to further assist in reducing risk to humans from hazardous waste exposure.

In FY 2003, EPA will focus on four overarching themes in achieving its objectives:

- Homeland Security: Enhancing EPA's accident prevention, emergency preparedness, and emergency response programs to ensure the safety and health of the public, program personnel, and other emergency response personnel. The Agency will then be able to provide appropriate and timely crisis and consequence management related to weapons of mass destruction.

- Revitalization: Broad promotion of the successes and lessons learned by the brownfields program and other waste program revitalization efforts, and how revitalization can complement our traditional cleanup programs and lead to faster cleanups and productive reuse of properties.

- One Cleanup Program: Creating a national dialogue on the future of Superfund and other waste/cleanup programs. Continue progress in cleanups while increasing consistency and transparency across programs.

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

Homeland Security

In support of Homeland Security, the Agency is requesting $86 million to strengthen the Agency's preparedness, response structure and improve state and local emergency response capabilities, continue operations of the Environmental Response Team Center West (ERTC-West), and research decontamination of buildings resulting from a release of biological agents.

Through the ERTC-West, the Superfund Program will maintain an around-the-clock emergency response activation system to support regions and states in the western part of the country. The ERT provides critical technical support services to EPA's response personnel in the field. These services include: environmental monitoring, decontamination, technical assistance on hazardous and radiation emergencies, and support to FBI-led response teams. The ERT also offers technical training to Federal, State, and local government officials in the latest response technology.

EPA plays a vital role in helping to protect the American people from hazardous substances releases as well as the highly dangerous agents (chemical, biological, radiological) associated with acts of terrorism. Any major terrorism event, whether it involves explosives, conventional hazardous materials or radiological, chemical or biological agents, will necessitate an EPA response to, first, assess the risks to public health, the environment and to response workers, second, to manage and mitigate the hazards of residual contamination, and, third, to conduct assessments of the adequacy of the response sufficient to allay the concerns of the public who will re-occupy the affected area. Currently, EPA's capability to conduct such responses resides in our Emergency Response program.

The Agency's chemical emergency preparedness and prevention (CEPP) program complements EPA's emergency response efforts. This program addresses the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases whether an incident may be accidental or intentional, as is the case in releases caused by terrorist acts. To meet its homeland security obligations the CEPP program works with state agencies and Local Emergency Planning Committees (LEPCs) to help strengthen their capabilities to prepare for and respond to potential incidents of terrorism. The LEPC is a community organization that brings together all entities (first responders, fire departments, hospitals, emergency technicians, planners, industry, the media, and local elected officials) that have primary responsibility for emergency preparedness at the local level. The program also works in partnership with the chemical and petrochemical industry to improve site security and the safe operations of facilities throughout the country.

Within the National Response System, EPA supports a national emergency preparedness and response capability. Under the National Response Team (NRT), Regional Response Team (RRT) and Federal Response Plan (FRP) the Federal government helps states and local governments address major incidents that are beyond their capabilities, including those involving terrorism. EPA chairs the NRT and co-chairs the 13 RRTs throughout the U.S. which integrates actions of all Federal partners to prevent, prepare for and respond to hazardous material releases including chemical, biological and radiological substances. The Agency also participates with other Federal agencies to implement national security, continuity of operations and other homeland security requirements.

The FY 2003 President's Budget requests resources to conduct research on better technologies and assessments to cleanup buildings contaminated by biological and chemical agents. These efforts will include the transfer of technologies and guidance on decontamination processes, evaluation of existing and new cleanup and detection technologies, development of risk assessment

methodologies, and production of rapid decontamination techniques and technologies.

Revitalization

To address the theme of revitalization, EPA is requesting $200,000,000 to implement the Small Business Liability Relief and Brownfields Revitalization and Environmental Restoration Act (H.R. 2869), signed by President Bush on January 11, 2002. Brownfields are abandoned, idled, or underused industrial and commercial properties and are not traditional Superfund sites. Generally, Brownfields are not highly contaminated and, therefore, present lesser health risks. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. This legislation promotes brownfields redevelopment by providing financial assistance for assessment and cleanup, reforming Superfund liability and enhancing state response programs. The legislation was the top environmental priority of the Administration and EPA will be working with Congress, other Federal agencies, states, tribes, local governments, the private sector and non-profit organizations on its implementation. In addition to the activities which have been carried out in the past, the new legislation will expand EPA's ability to address sites contaminated with petroleum and permit EPA to establish grants for brownfields cleanup.

EPA is committed to integrating the concept of revitalization and reuse into the process of cleaning up abandoned, inactive and contaminated waste sites, active and closing Federal facilities, and other properties. An essential element of the assessment and cleanup of contaminated property, whether they are Brownfields, Superfund, RCRA Corrective Action, Base Realignment and Closure, Federal facilities or USTs, is the ultimate goal of revitalizing and reusing that property. Although assessment and cleanup provide clear environmental benefits in mitigating exposure to hazardous contaminants, the ultimate goal is the reuse of these properties to improve the quality of life in America's communities. Building upon the Agency's recent successes in this area, EPA's waste cleanup programs will actively seek out opportunities to leverage public or private investment, create jobs associated with reuse, and increase the overall acreage reused.

One Cleanup Program

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

One of the Superfund program's major goals is to have responsible parties pay for and conduct cleanups at abandoned or uncontrolled hazardous waste sites. The Superfund enforcement

program maximizes Potentially Responsible Party (PRP) participation and is committed to reforms, which increase fairness, reduce transaction costs, and promote economic redevelopment. The Agency also seeks to recover costs associated with a site cleanup from responsible parties when Superfund trust fund monies have been expended.

The RCRA corrective action program addresses a significant number of industrial sites, including Federally-owned facilities. Administered by EPA and authorized states, these sites include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial facilities must undergo a cleanup under the RCRA program. Of these facilities, EPA and state partners have identified over 1,700 facilities as high priority because people or the environment are likely to be at significant current or future risk. As evidence of success in meeting this challenge, EPA and the states have now documented that both exposure to contamination and further migration of contaminated groundwater have been controlled at over 600 of the 1700 high priority facilities.

The RCRA corrective action program continues to emphasize redevelopment of RCRA corrective action sites to prevent these properties from becoming Brownfields (unused or underused property due to perceived concerns regarding hazardous waste contamination). Through its nine active pilots, the RCRA Brownfields Prevention Pilot program showcases the implementation of the RCRA corrective action reforms and the use of innovative approaches to cleanup activities. In addition, the RCRA program also sponsors a Targeted Site Effort (TSE) to focus a small amount of funds at specific sites to give assistance in moving forward in the corrective action process.

In partnership with the states, the Agency prevents releases, detects releases early in the event they occur, and addresses leaks from USTs containing petroleum and hazardous substances. The strategy for achieving this goal is to promote and enforce compliance with the regulatory requirements aimed at preventing and detecting UST releases, thereby protecting our nation's groundwater. While the vast majority of the approximately 700,000 active USTs have the proper equipment per Federal regulation, significant work remains to be done to ensure UST owners and operators properly maintain and operate their systems. The Agency's role is to work with states to promote compliance with the spill, overfill, and corrosion protection requirements, and ensure that the leak detection requirements are a national priority. This encompasses compliance for all Federally-regulated UST systems, including those on private and public property, in Indian Country, and Federal facilities. The Agency has primary responsibility for implementing the UST program in Indian Country.

The Leaking Underground Storage Tank (LUST) Program will continue its progress by promoting rapid and effective responses to releases from USTs containing petroleum. EPA plays a key role in implementing the national LUST Program by supporting the management of state, local, and tribal enforcement and response capability, as well as, sharing lessons learned with state regulators and the regulated community to increase cleanup accomplishments. The Agency's highest priorities in the LUST program over the next several years is to address approximately 150,000 cleanups that have yet to be completed, and to address methyl-tertiary-butyl-ether (MTBE) contamination which states are increasingly discovering, and which pose unique and often difficult remediation challenges.

Recycling, Waste Minimization, and Energy Recovery

In support of the recycling, waste minimization and energy recovery theme, the RCRA program will focus on improving current waste management practices, providing greater regulatory flexibility and promoting opportunities for converting waste to future energy and raw material sources. In FY 2003, EPA will undertake a comprehensive review of its waste management programs and regulations regarding hazardous and non-hazardous waste recycling, waste minimization and energy recovery practices. The review objective will be to identify opportunities to further the goal of resource conservation and recovery, while remaining true to the mission of ensuring safe and protective waste management practices.

Other elements of the Better Waste Management goal are associated with the promotion of safe waste management practices, which serve to avoid future cleanup and redevelopment burdens. For facilities that currently manage hazardous wastes, EPA and the authorized states ensure human health and environmental protection through the issuance of RCRA hazardous waste permits. The RCRA program works primarily through state partners to reduce the risks of exposures to dangerous hazardous wastes by maintaining a "cradle-to-grave" waste management framework. Under this framework, EPA and the states oversee the handling, transport, treatment, storage, and disposal of hazardous waste, ensuring that communities are not exposed to hazards through improper management. Hazardous waste management facilities with appropriate controls in place have made significant progress in minimizing the threat of exposure to hazardous substances. To date, 48 states, Guam, and the District of Columbia are authorized to issue permits. State authorization for all portions of the RCRA program, including regulations that address waste management issues included in permits, is an important Agency goal. The RCRA program strives to achieve greater efficiencies by adapting new innovative technologies that not only streamline permitting processes and better protect our land but also provide greater regulatory flexibility and opportunity for converting waste to future energy and raw material sources.

The Agency's chemical emergency preparedness and prevention program addresses some of the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases, whether an incident may be accidental or intentional, as is the case in a terrorist event. The program also implements right-to-know initiatives to inform the public about chemical hazards and encourages actions at the local level to reduce risk. Section 112(r) of the Clean Air Act requires an estimated 16,000 facilities to develop comprehensive risk management plans (RMPs) and submit them to EPA, state agencies, and Local Emergency Planning Committees. The Agency believes that states are best suited to implement the RMP program because they benefit directly from its success and they often have established relationships with the communities that may be at risk.

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

agreement with the U.S. Coast Guard.

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

Research

The FY 2003 waste research program supports the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by accelerating scientifically defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields in accordance with CERCLA. Research will: 1) provide improved methods and dose-response models for estimating risks from complex mixtures contaminating soils and groundwater; 2) provide improved methods for measuring, monitoring, and characterizing complex waste sites in terms of soils and groundwater; 3) develop more reliable technologies for cleanup of contaminated soils, groundwater, and sediments; and 4) determine the effects of contaminants on the environment. A new effort in Homeland Security will also begin in FY 2003 and focus on critical issues, such as the decontamination of buildings, in order to prevent and respond to future instances of bioterrorism.

Waste identification, waste management, and combustion constitute the three major areas of research under RCRA in FY 2003, as the Agency works towards preventing releases through proper facility management. Waste identification research will focus on multimedia, multi-pathway exposure modeling and environmental fate and transport; physical estimation in support of risk-based exemption levels for wastes; development of targeted exemptions of waste streams that do not pose unacceptable risks; and efforts to streamline the waste de-listing process. These efforts could significantly reduce compliance costs while still supporting EPA's mission to protect human health and the environment. Waste management research will focus on developing more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies, while combustion research will continue to focus on characterizing and controlling emissions from waste combustion.

Strategic Objectives and FY 2003 Annual Performance Goals

Control Risks from Contaminated Sites and Respond to Emergencies

- EPA and its partners will complete 22,500 Leaking Underground Storage Tank (LUST) cleanups for a cumulative total of approximately 313,300 cleanups since 1987.
- EPA and its partners will complete 40 Superfund cleanups (construction completions).
- Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL

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

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

- 257 (for a cumulative total of 1,252 or 73%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 1,054 or 61%) of high priority RCRA facilities will have groundwater releases controlled.

- To ensure cost-effective and technically sound site clean-up, deliver state-of-the are guidance and methods to EPA and stakeholders for risk management of fuel oxygenates; organic and inorganic contamination of sediments, ground water and/or soils; and oil spills.

- EPA will provide additional site assessment funding to 74 new sites, and to 52 existing sites, resulting in a cumulative total of 3,350 properties assessed, the generation of 21,300 jobs, and the leveraging of $5.0 billion in cleanup and redevelopment funds since 1995.

Regulate Facilities to Prevent Releases

- EPA and its state and tribal partners will ensure that 80% of UST facilities will be in significant operational compliance with leak detection requirements, and 85% of UST facilities will be in significant operational compliance with spill, overfill and corrosion protection regulations.

- 77.2 of the hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater. This represents an additional 39 facilities meeting the goal this year.

- Certify that 8,000 55 gallon drums of radioactive waste (containing approximately 24,000 curies) shipped by DOE to the Waste Isolation Pilot Plant are permanently disposed of safely and according to EPA standards.

Highlights

In FY 2003, EPA and state cleanup actions will protect human health by reducing the effects of uncontrolled releases on local populations and sensitive environments. The Agency will build on past successes in cleaning up sites. The following accomplishments provide examples of what has been done by the Agency to achieve its goal:

- cleaned up 804 Superfund National Priorities List Sites through September 30, 2001;

- conducted over 6,500 Superfund removal response actions from 1982 through September 30, 2001;
- assessed over 43,700 potential Superfund sites;
- removed more than 32,700 sites from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) waste site list;
- secured greater than $20 billion in PRP commitments, through response and cost recovery settlements, over the life of the Superfund program;
- resolved potential liability of 24,700 small volume waste contributing parties through more than 475 de minimis settlements;.
- responded to or monitored 300 oil spills in a typical year;
- awarded 399 Brownfields assessment pilots, over 129 brownfields cleanup revolving loan fund pilots, and 48 job training pilots through September 1, 2001;
- Over 600 of approximately 1,700 high priority RCRA sites targeted for aggressive risk reduction have met GPRA Environmental Indicator goals;
- 74% of approximately 2,750 hazardous waste management facilities have effective controls in place;
- Launched a RCRA Brownfields Prevention Pilot program with nine active pilots;
- Cleaned approximately 259,000 leaking underground storage tanks since 1987.

In FY 2003, EPA's goal is to complete construction at 40 private and Federal Superfund sites and take action to address contamination at 275 sites using removal authorities. In addition, EPA and its partners will make final site assessment decisions on 475 additional sites. The Superfund enforcement program's goal will be to obtain PRP commitments to initiate work at 70% of construction starts at non-Federal facility sites on the NPL and to conduct or fund removals.

In FY 2003, the Superfund redevelopment initiative will facilitate the return of additional Superfund sites to productive reuse. The Agency has compiled a list of over 260 Superfund sites that have been recycled. At these sites, more than 60,000 acres are now in ecological or recreational use. Approximately 15,500 jobs, representing approximately $500 million in annual income, are located at sites that have been recycled for commercial use.

In FY 2003, the Agency will improve its Homeland Security preparedness and response capability, workforce safety, and coordination with our Federal and local partners. This will support national efforts to combat terrorist threats including biological, chemical and radiological attacks on populations in the United States. The Agency will implement a $10 million initiative to establish a viable Homeland Security program at EPA that will reduce the risk to the public, better protect our emergency responders, and prevent environmental harm. This initiative will support the National Homeland Security strategy developed by the Office of Homeland Security and the White House that assigns EPA a critical role in preparing for and responding to terrorist incidents. This responsibility is based upon EPA's unique expertise and experience in emergency preparedness and response to hazardous material releases.

The Agency's Homeland Security efforts will concentrate on: (1) developing a multi-skilled workforce and providing them with advanced training; (2) implementing an EPA-wide event planning/response program that can fully participate in national inter-agency exercises; (3) providing

state-of-the-art response equipment (e.g., personal protection, field analysis, decontamination) and the resources to maintain the equipment; and (4) enhancing planning, coordination, and outreach efforts at the local, state, and Federal levels.

Reducing chemical accidents is vital to ensure that communities are not exposed to hazardous materials. The Agency will continue its efforts to help states and local emergency planning committees implement the risk management plan (RMP) program. EPA continues to make steady progress in this area and, in FY 2003, will delegate the program to eight additional states for a cumulative total of twenty-five. To reach this goal, EPA will provide technical assistance grants, technical support, outreach, and training to state and local emergency planning committees. Through these activities, states, local communities, and individuals will be better prepared to prevent and prepare for chemical accidents.

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

The EPA Brownfields program coordinates a Federal, state, tribal, and local government approach to assist in addressing environmental site assessment and cleanup. This program has experienced tremendous growth in applications for new and supplemental pilots, averaging 198 applications per year. The passage of Brownfields authorizing legislation in December 2001 allows an expanded program to address environmental and economic challenges presented at brownfields sites including:

- grants to address petroleum contaminated sites
- grants for clean up activities
- expanded resources for state and tribal programs
- Tribal program funds for monitoring public health
- responding to mine scarred lands, contaminative, and controlled substances

In FY 2003, the Brownfields program will provide $29 million in funding and technical support for 74 new assessments and 52 existing assessments. These assessments provide states (including U.S. territories), political subdivisions (including cities, towns, and counties), and Federally recognized Tribes with necessary tools, information, and strategies for promoting a unified approach to environmental site assessment, characterization, and redevelopment. Benefits derived from this effort will include leveraging a total of $5 billion in cleanup and redevelopment funds, generation of 21,300 jobs, and assessment of 3,350 sites through FY 2003. In addition, the Agency and its Federal partners will continue to support the existing 28 showcase communities which serve as models to demonstrate the benefits of interagency cooperative efforts in addressing environmental and economic issues related to brownfields. The showcase communities capitalize on a multi-agency partnership designed to provide a wide range of support depending on the particular needs of

each community.

As part of this initiative, EPA will use approximately $30 million to address the regulatory gap that prohibits EPA funds from addressing the estimated 200,000 abandoned underground storage tanks (USTs) and other petroleum contamination found on brownfields properties. With these funds, EPA will support assessment and cleanup of petroleum contaminates in 50 brownfields communities.

To further enhance a community's capacity to respond to brownfields redevelopment, the Agency will also provide funding for 33 communities to capitalize brownfields cleanup revolving loan funds (BCRLF) with the requested increase. All communities with brownfields properties are eligible to apply. For the first time, Brownfields legislation authorizes funding for cleanup grants. It is estimated that cleanup funding might be available for up to 25 sites.

The Agency will also provide $50 million for states and Indian tribes to establish or enhance their response programs. The new legislation will also permit the recipients to capitalize revolving loan funds, purchase insurance or develop a risk sharing pool, an indemnity pool, or an insurance mechanism to provide financing for response actions under a state response program.

To augment the communities' capacities to clean up brownfields sites, EPA will fund 10 additional job training pilots for community residents and will provide $3 million to the National Institute of Environmental Health Sciences (NIEHS) to supplement its minority worker training programs that focus on brownfields workforce development activities. In addition, EPA will continue to explore connections between RCRA low-priority corrective action efforts and cleanup of brownfields properties.

In FY 2003, 257 additional high priority RCRA facilities will have current human exposures under control and 172 additional high priority RCRA facilities will have migration of contaminated groundwater under control. To accomplish its RCRA objectives, the Agency has improved the pace of cleanups through administrative reforms announced in 1999 and 2001. The reforms successfully established an environment for program implementers to be innovative and results-oriented by promoting faster, focused, more flexible cleanups. The Agency developed these reforms with input from states, industry and environmental organizations to accomplish the following objectives: pilot innovative approaches, accelerate the changing culture, connect communities to cleanups, and capitalize on redevelopment potential.

In FY 2003, the RCRA hazardous waste permits program will have permits or other approved controls in place for 77% of the hazardous waste management facilities (out of a baseline of approximately 2,750 facilities). Securing approved controls in place at facilities minimizes the threat of exposure to hazardous substances because the RCRA program's comprehensive framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste. In addition, the program is planning an e-permitting initiative which would complement the new standardized permit process. This initiative will expedite and simplify the permitting process and provide better public access to permitting information.

The Agency has several efforts underway to improve waste management practices throughout the RCRA program to better reflect actual levels of risk. The hazardous waste identification rule and follow-up efforts seek to exclude lower risk wastes from hazardous waste regulation. In FY 2003, the Agency will continue to develop exemptions for specific low-concern wastes as well as concentration-based exemption levels for constituents occurring in hazardous wastes.

As the maximum achievable control technology (MACT) standards for hazardous waste incinerators and kilns are implemented, emissions of dioxins, furans, toxic metals, acid gases and particulate matter from these sources will be reduced. These efforts are intended to further reduce the indirect exposure to hazardous constituents in emissions, especially to children. In 2000, the Agency initiated work on Phase II MACT standards for hazardous waste burning boilers and halogen acid furnaces. However, in 2001 the D.C. Circuit Court of Appeals vacated the Phase I MACT standards. In 2002 and FY 2003, EPA will work to revise the combustion standards and address the court's action.

In FY 2003, the Agency will work with states, industry, and community representatives to begin implementation of the 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.

Based on EPA's minimum national standards for municipal solid waste (MSW), states regulate landfill practices. The Agency worked with states to review the national standards. The Agency is currently initiating regulatory revisions to provide additional flexibility so that compliance is less costly and easier to achieve. Regulatory revisions will provide an opportunity for bioreactor technology, to pave the way for future new energy and raw material sources.

The Agency will accelerate the pace of LUST cleanups through additional support to the states to hire staff to oversee and expedite cleanups. Better oversight and quicker action can reduce the costs of cleaning up MTBE contamination, which can cost 100% more than a cleanup involving the typical gasoline contaminants. Accelerating the pace of these cleanups will result in 500 additional cleanups completed, from the end of FY 2002, that may involve groundwater and MTBE contamination. In turn, fewer communities and individuals, including those in Indian Country, will lose their drinking water supplies. UST owners and operators undertake nearly all cleanups under the supervision of state or local agencies. The Agency oversees these activities in Indian Country.

Research

In FY 2003, contaminated sites research will be conducted to: 1) reduce uncertainties associated with soil/groundwater sampling and analysis; 2) reduce the time and cost associated with site characterization and site remediation activities; 3) evaluate the magnitude of the risks posed by contaminants to human health and the ecosystem as well as the contributions of multiple exposure pathways, the bioavailability of adsorbed contaminants and treatment residuals, and the toxicological properties of contaminant mixtures; and 4) develop and demonstrate more effective and less costly remediation technologies involving complex sites and hard-to-treat wastes. Other proposed work will enhance and accelerate current contaminated sediments research efforts, providing the data needed to make and support crucial decisions on high impact and high visibility sites. Research focusing on Homeland Security issues such as transfer of technologies and guidance on decontamination processes, evaluating existing and new cleanup and detection technologies, developing risk assessment methodologies for the both the short and long term, and producing rapid decontamination techniques and technologies for cleanup of contaminated buildings will begin in FY 2003. These research efforts are critical in order to prevent and respond to future instances of bioterrorism.

Waste management research in FY 2003 will support the Hazardous Waste Identification Rule (HWIR), a risk-based approach for delisting wastes, as well as study improved ways to minimize waste releases and impacts. Additionally, waste management research will be conducted to improve the management of both solid and hazardous wastes.

External Factors

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

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

For the RCRA program, the Agency's ability to achieve its release prevention and cleanup goals is heavily dependent on state participation. In most cases, states have received authorization (hazardous waste management program) or approval (municipal solid waste landfill permit program) and are primary implementors of these programs. As such, EPA relies on states to perform many of the activities needed to achieve these targets. State programs are also primarily responsible for implementing the UST/LUST program. The Agency's ability to achieve its goals is dependent on

the strength of state programs and state funding levels. The Agency will build upon its commitment to provide states and tribes with technical support and incentives to meet national LUST cleanup targets. Technical support and incentives range from promoting multi-site cleanup agreements, conducting cleanup pilots to test the benefits of incentive-based cleanups, such as pay-for-performance contracting and providing other tools to help states and the tribes achieve faster, less expensive, and more effective LUST cleanups.

For the risk management and Homeland Security programs, the Agency recognizes that accident prevention and response, as well as preparedness for terrorist incidents, are inherently local activities. To succeed, the program relies on the commitment and accomplishments of the various stakeholders, including industry, state and local government, and other Federal partners. EPA's success will depend upon the willingness and ability of stakeholders to deliver on the commitments and obligations in their plans. EPA plays a key role, but neither controls the resources nor sets the priorities to ensure that all Federal, state and local participants are engaged at a level that will ensure our commitments are met.

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

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

Objective: Control Risks from Contaminated Sites and Respond to Emergencies

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Control Risks from Contaminated Sites and Respond to Emergencies	**$1,524,914.9**	**$1,397,140.9**	**$1,544,018.6**	**$146,877.7**
Environmental Program & Management	$61,220.7	$67,012.0	$90.464 8	$23.452 8
Hazardous Substance Superfund	$1,308,981.8	$1,175,519.4	$1,166.199.3	($9,320.1)
Leaking Underground Storage Tanks	$69,762.9	$70,842.7	$70,100.2	($742.5)
Oil Spill Response	$876.6	$905 2	$909.9	$4.7
Science & Technology	$51,393 2	$47,948.5	$5,931.3	($42.017.2)
State and Tribal Assistance Grants	$32,475.3	$34,913.1	$210,413.1	$175,500.0
Superfund Reimbursables	$204.4	$0.0	$0.0	$0.0
Total Workyears	3,556.1	3,580.7	3.698.3	117.6

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$14,390.0	$0.0	$0.0	$0.0
Assessments	$79,417.5	$76,472.9	$76,236.3	($236.6)
Brownfields	$92,540.3	$97,632.7	$199,768.9	$102,136.2
Capacity Building	$755.4	$725.1	$652.6	($72.5)
Civil Enforcement	$0.0	$612.2	$582.1	($30.1)
Compliance Assistance and Centers	$1,174.3	$670.0	$689 8	$19.8
Congressionally Mandated Projects	$7,225.4	$8,815.0	$0.0	($8,815.0)
Facilities Infrastructure and Operations	$44,107.7	$50.320.3	$45,816.0	($4,504.3)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Federal Facilities	$30,622.0	$31,206.5	$31,915.5	$709.0
Federal Facility IAGs	$8,455.1	$8,784.7	$9,091.7	$307.0
Federal Preparedness	$9,728.2	$9,849.3	$9,883.0	$33.7
Hazardous Substance Research:Hazardous Substance Research Centers	$4,527.7	$4,576.8	$4,599.2	$22.4
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	$6,554.0	$6,501.0	$6,545.0	$44.0
Homeland Security	$3,194.0	$45,485.4	$86,310.4	$40,825.0
Homestake Mine	$0.0	$0.0	$8,000.0	$8,000.0
LUST Cleanup Programs	$10.055.4	$10,067.4	$10,285.4	$218.0
Leaking Underground Storage Tanks (LUST)Cooperative Agreements	$58,341.3	$59,331.9	$58,341.2	($990 7)
Legal Services	$4,643 6	$4,610.7	$5,077.4	$466.7
Management Services and Stewardship	$13.538.0	$27,997.8	$29,308.3	$1,310.5
Other Federal Agency Superfund Support	$10,676.5	$10,676.0	$10,676.0	$0.0
Planning and Resource Management	$26 4	$0.0	$0.0	$0.0
RCRA Corrective Action	$41,150 9	$38,262.3	$38,965.2	$702.9
RCRA State Grants	$32,736.6	$31,913.1	$31,913.1	$0.0
Radiation	$14,032.7	$14,623.5	$14,899.8	$276.3
Regional Management	$1,209.3	$1,467.0	$1,452 5	($14.5)
Research to Support Contaminated Sites	$30,666.5	$29,896.9	$28,121 1	($1,775.8)
Superfund - Cost Recovery	$29,495.5	$29,477.5	$30,375 9	$898.4
Superfund - Justice Support	$28.437.3	$28,150.0	$28,150.0	$0.0
Superfund - Maximize PRP Involvement (including reforms)	$82,193.9	$81,701.1	$84,396.9	$2,695 8
Superfund Remedial Actions	$493,924 2	$484,659.8	$489,355.0	$4,695.2
Superfund Removal Actions	$198.973.0	$202,654.0	$202,610.3	($43.7)

FY 2003 Request

Leaking Underground Storage Tanks

In partnership with states and tribes, the goal of the Leaking Underground Storage Tank (LUST) program is to promote better, faster, and less expensive cleanups while encouraging the return of properties to productive and appropriate reuse. The LUST program addresses the threat to groundwater from Federally regulated leaking underground storage tanks that contain petroleum or hazardous substances. Underground Storage Tank (UST) owners and operators undertake nearly all corrective actions under the supervision of state or local agencies. The Agency oversees these activities in Indian Country.

In FY 2003, the Agency's goal is to complete 22,500 cleanups under the supervision of EPA and its state, local and tribal partners. The Agency will also continue to encourage the return of properties to productive reuse as part of the LUST corrective action process. The LUST program requires that UST owners and operators take appropriate measures to clean up releases. In recent years, contamination from the petroleum additive, methyl tertiary butyl ether (MTBE), has posed unique and significant challenges for the LUST Program. In FY 2003, the Agency plans to further assess the impact of groundwater and MTBE contamination on cost and the duration of the cleanup efforts. This assessment will enable the Agency to more effectively address the complex nature of groundwater and MTBE contamination cleanup efforts.

One of the Agency's highest priorities in the LUST program over the next several years is to address approximately 150,000 cleanups that have yet to be completed. A vast majority of these releases are contaminated by MTBE which, if not addressed rapidly, moves quickly through soil and can easily contaminate groundwater and drinking water. This is a serious concern in Indian Country where there is more reliance on groundwater as a source for drinking water. Many cleanups which involve groundwater and MTBE contamination, result in more complex, costly, and time-consuming cleanups. In spite of this, the Agency will try to accelerate the pace by providing support to state staff to oversee and expedite LUST cleanups. Better oversight and quicker action can reduce the costs of cleaning up MTBE contamination, which can cost 100% more than a cleanup involving typical gasoline contaminants. Accelerating the pace of these cleanups will result in fewer communities and individuals, including those in Indian Country, losing their water supplies.

The LUST Program will also help to advance EPA's one cleanup program theme by continuing its close relationship and dialogue with states, which are the primary implementers of the LUST Program, and with tribes. Furthermore, the Senior Cleanup Council, comprised of upper-level EPA and state managers representing all cleanup programs including the LUST Program, plans to continue their work to address policy and implementation issues that will streamline and improve consistency among all cleanup programs.

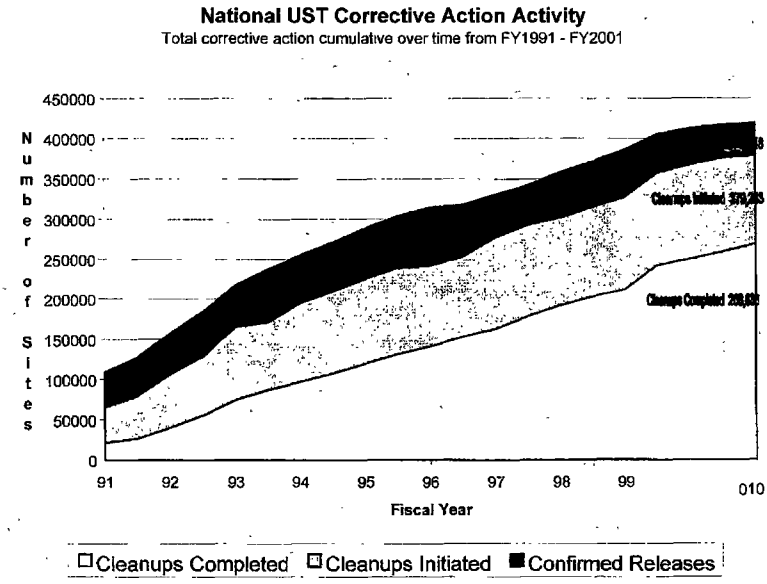
EPA plays a key role in implementing the national LUST Program by supporting the management of state, local, and tribal enforcement and response capability. In addition, the Agency shares lessons learned with state regulators and the regulated community to increase cleanup accomplishments. EPA will provide states and Tribes with technical support and incentives to meet national LUST cleanup goals. Technical support and incentives will include promoting multi-site cleanup agreements, conducting cleanup pilots to test the benefits of incentive-based cleanups (e.g., Pay-For-Performance), and providing other tools which will help states and the tribes achieve faster, less expensive, and more effective LUST cleanups.

To address these LUST sites and to help states make more efficient use of their resources, including state funds that reimburse some UST owners and operators for a portion of their cleanup costs, the Agency will fund cooperative agreements under which states oversee cleanups by UST owners and operators. In cases where the responsible owner or operator is unknown, unwilling, or unable to clean up releases, LUST resources are available to pay for this activity. To be effective, remediation technologies will need to advance in order to address new contaminants, such as MTBE.

As substitutes are sought for MTBE, and as the composition of gasoline changes in response to changing engine performance requirements, states will face the continuing challenge of training new staff in the new remediation and site investigation technologies.

The Agency has the primary responsibility for implementing the LUST program in Indian Country. EPA oversees and conducts site assessments and remediation, in part, through a national LUST contract designed specifically for Indian Country. Through the end of September 2001, there were 1,150 confirmed releases, 886 cleanups initiated, and approximately 532 cleanups completed. The Agency estimates that cleaning up all known and yet-to-be-discovered releases in Indian Country will take several years.

Superfund



In support of the Agency's one cleanup program theme, the Superfund program addresses contamination from uncontrolled releases at Superfund hazardous waste sites threatening human health, the environment, and the economic vitality of local communities. Superfund sites with contaminated soils and groundwater exist nationally in a large number of communities. Many of these sites are located in urban areas, are accessible by children, and expose disadvantaged populations to contamination. Once contaminated, groundwater and soils may be extremely difficult

and costly to clean up. Some sites will require decades to clean up because of their complexity.

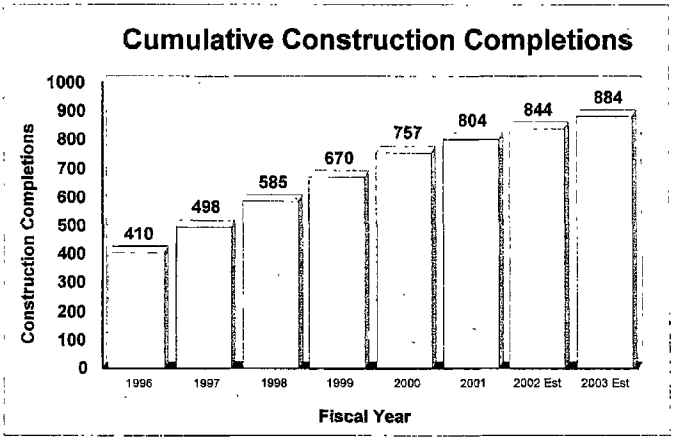
To protect human health and the environment and address potential barriers to redevelopment, EPA works with states, Indian Tribes, and other Federal agencies to: 1) assess sites and determine whether they meet the criteria for Federal Superfund response actions; 2) prevent, minimize or mitigate significant threats at Superfund sites through removal actions; 3) generate accurate risk assessment and cost-performance data critical to providing the technical foundation for decisions made in environmental cleanup programs; 4) complete remedial cleanup construction at sites listed on the NPL; 5) develop technologies for cost-effective characterization and remediation; 6) ensure long-term protectiveness of remedies by overseeing operations and maintenance and conducting five-year reviews; 7) enhance the role of states and Indian Tribes in the implementation of the Superfund program; 8) work with the surrounding communities to improve their direct involvement in every phase of the cleanup process and their understanding of potential site risk; 9) continue progress of cleanups while increasing consistency with other EPA cleanup programs; and 10) promote reuse and redevelopment of Superfund sites.

EPA's efforts to address uncontrolled releases at Superfund sites begin when states, Indian tribes, citizens, other Federal agencies, or other sources notify EPA of a hazardous waste site or incident. EPA confirms this information and places sites requiring Federal attention in the Agency's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database (in the case of Federal facilities, sites are placed on the Federal facility hazardous waste docket). EPA assesses these sites to determine whether Federal action is needed. In most cases, EPA makes a determination that no further Federal action is required. These sites are removed from the inventory. If warranted, EPA may refer sites removed from its inventory to state or Tribal environmental authorities for further attention. For those sites requiring additional action to protect public health and the environment, EPA seeks the course of action best suited for the individual site. Sites posing immediate risks may be addressed under removal authority. EPA may defer response at sites with ongoing state action. In some instances, potentially responsible parties enter into agreements with EPA to evaluate or clean up sites prior to listing on the NPL. In such cases, where cleanup is progressing in a timely and protective manner or is completed prior to final listing, listing on the NPL may be unnecessary. Some sites may be addressed under both removal and remedial authorities when, for example, early removal action is taken to address immediate risks at sites on the NPL. As a matter of policy, EPA seeks a concurrence from a governor before listing a site on the NPL.

EPA undertakes removals to prevent, reduce or mitigate threats posed by releases or potential releases of hazardous substances, pollutants, and contaminants in emergency and non-emergency situations at NPL and non-NPL sites. EPA undertakes removal response actions at: 1) emergency incidents where response is necessary within a matter of hours (e.g., threats of fire or explosion); 2) time-critical incidents posing public health and environmental threats; and 3) non-time critical situations at both NPL and non-NPL sites to promote quicker and less costly cleanup. Sites known to pose the greatest potential risk to public health and the environment receive priority.

For sites listed on the NPL, remedial work begins with site characterization and a feasibility study to review site conditions and proposals for future land use. These actions form the foundation for the record of decision and remedy selection. Public involvement is a key component in selecting the proper remedy at a site. A remedial action is performed upon approval of the remedial design and represents the actual cleanup or other work necessary to implement the remedy selected Potentially responsible parties or other Federal agencies perform remedial action work. EPA or states may also perform remedial cleanup as Fund-financed actions.

In FY 2003, EPA will complete construction at 40 NPL sites. As of September 30, 2001,



EPA completed all final cleanup plans at over 1,000 Superfund NPL sites, undertaken over 6,500 removals at hazardous waste sites to immediately reduce the threat to human health and the environment, assessed over 43,700 sites, and removed more than 32,700 sites from the CERCLIS waste site list to help promote the economic redevelopment of these properties. The Agency also has cleanup construction underway or has completed 92% of the 1,479 sites on the final NPL, including:

- 54% of sites have all cleanup construction completed (804 sites)
- 26% of sites have remedial cleanup construction underway (391 sites)
- 11% of sites have had or are undergoing a removal cleanup action (167 sites).

In FY 2003, EPA will continue its efforts to control human exposure pathways and control the migration of contaminated groundwater at NPL and non-NPL-sites.

Additionally, environmental data gathered by EPA through August 30, 2001, shows that Superfund continues to fulfill its environmental mission and is reducing the risks to human and

ecological health posed by dangerous chemicals in the air, soil, and water. Since the inception of the Superfund program, EPA has: 1) provided alternative water supplies to over 498,000 people at NPL and non-NPL sites to protect them from contaminated ground and surface water; 2) relocated over 29,000 people at NPL and non-NPL sites in instances where contamination posed the most severe immediate threats; 3) cleaned 467 million cubic yards of hazardous solid waste; and, 4) cleaned 353 billion gallons of hazardous liquid waste.

Although completion of construction is a major milestone in the Superfund program, many activities occur at a site after this milestone is achieved. These "post-construction" activities include the following: 1) oversight of operation and maintenance activities performed by the states and PRPs to ensure that the cleanup works properly and the site remedy continues to be protective of human health and the environment; 2) operation of Fund-financed groundwater restoration systems for up to 10 years (long-term response), and oversight of states and PRPs operating these systems until cleanup goals are achieved; 3) implementation of institutional controls and oversight to ensure they remain protective; 4) five-year reviews to assure that remedies remain protective; 5) optimization of groundwater remediation systems to improve performance and/or reduce costs; and 6) site deletion from the NPL. As more sites move into post-construction, the Agency is devoting more resources to assure adequate long-term stewardship. Also, these post-construction actions are essential to assure that Superfund sites are safe for revitalization and reuse following cleanup.

EPA is committed to involving citizens in the site cleanup process. Superfund bases its community involvement on two-way communication designed to keep citizens informed about site progress and give them the opportunity to provide input on site decisions. The Agency conducts outreach efforts, such as holding public meetings, establishing community advisory groups, and distributing site-specific fact sheets. EPA also provides communities with financial assistance to hire technical consultants to assist them in understanding the problems and potential solutions to address hazardous waste cleanups. The Agency strives to create a decision-making process to clean up sites that communities feel is open and legitimate, and improves the community's understanding of potential risk at hazardous waste sites.

States and Indian Tribes are key partners at Superfund sites. EPA can authorize the states or Tribes to carry out Fund-financed remedial actions. However, states and Tribes more often operate in the role of a support agency to remain actively involved in site response activities while EPA plays the lead role. To support their involvement as a lead or support agency, EPA provides financial support through cooperative agreements to conduct removal, site assessment, remedial, and enforcement projects and for core infrastructure activities.

Under core program cooperative agreements, EPA provides non-site specific funds to develop, maintain and enhance state and Tribal capacity to manage and implement the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) responses. EPA currently has core program cooperative agreements with 46 states and 55 Tribes or Tribal consortia. Activities funded under the core program cooperative agreements include: 1) developing procedures for emergency response and long-term remediation (e.g., health and safety plans, quality assurance project plans, and community relations plans); 2) satisfying all Federal requirements and assurances (e.g., fiscal and contract management activities for CERCLA); 3) providing legal

assistance (e.g., coordinating applicable or relevant and appropriate requirements (ARAR) identification); and 4) training staff to manage publicly-funded cleanups.

Across the country, thousands of Federal facilities are contaminated with hazardous waste, military munitions, radioactive waste, fuels, and a variety of other toxic contaminants. These facilities include many different types of sites, such as formerly used defense sites (FUDS), active, closing and closed installations, abandoned mines, nuclear weapons production facilities, fuel distribution areas, and landfills. EPA's Federal Facilities Restoration and Reuse Office works with the Department of Defense (DOD), the Department of Energy (DOE), other Federal agencies, states, Tribes, and the public to find protective, creative, and cost-effective cleanup solutions, while encouraging restoration and reuse. The Federal Facilities program provides technical and regulatory oversight at Federal facility sites to ensure protection of human health, effective program implementation, and meaningful public involvement. The Agency encourages citizen involvement by working with DOD to establish Restoration Advisory Boards and DOE to establish Site Specific Advisory Boards.

There is a rising demand for EPA's involvement in DOD's Military Munitions Response and FUDS programs. DOD has estimated that millions of acres of training ranges in the United States and its territories are contaminated with military munitions. By their nature, military munitions (unexploded ordnance, buried munitions, and reactive or ignitable soil) present explosive, human health, and environmental risks. When disturbed, munitions may explode causing immediate death or disablement to those nearby. The different types of military munitions vary in their likelihood of detonation. EPA is working on several initiatives with DOD, the states, and Federal Land Managers to help build DOD's Military Munitions Response program. Over the past several years, EPA has increased its focus on environmental investigations and cleanups of privately-owned FUDS. FUDS are sites not currently owned by DOD (this includes FUDS owned by the states, Tribes, cities, and other governmental entities, as well as individuals, corporations, etc.). The Agency is working on several initiatives with the United States Army Corp of Engineers, states, and Tribes in the identification and cleanup of over 9,000 FUDS nationwide.

The Superfund Federal Facilities Response program works on a large number of ongoing projects: 488 remedial investigations/feasibility studies, 74 remedial designs, and 212 remedial actions. In many cases, Federal facilities face unique challenges with types of contamination (e.g., radiation, military munitions), the size of the facility (e.g., DOE's Hanford is over 500 square miles), or the complexities of reuse related to environmental issues (e.g., base closure).

EPA partners with other federal agencies, states and local governments, and private industry to fulfill superfund program priorities when a site is radioactively contaminated. Under CERCLA, radioactively contaminated sites are addressed in a manner consistent with how chemically contaminated sites are addressed, accounting for the technical differences. The Radiation program provides radiological scientific and technical expertise and leadership in evaluating projects and providing field and laboratory support.

EPA has significantly improved the Superfund program largely as a result of reforms and reinvention continuously implemented since 1989 (e.g., "enforcement first", "worst sites first").

These efforts will continue in 2003. Over the years, Superfund has amassed many noteworthy achievements. Key accomplishments through the end of 2001 include: 1) establishing 84 community advisory groups at sites across the country; 2) reviewing 59 new site remedy decisions for an estimated savings of over $80,000,000 (FY 2000); 3) saving more than $1.3 billion in future costs from updating over 350 existing remedies (FY 2000); 4) evaluating over 30 planned projects to establish funding priorities based on site risks; and 5) archiving over 32,700 CERCLIS sites to help promote the economic redevelopment of these properties. Superfund has successfully integrated many of its reforms into the program, and these fundamental changes are continuing to produce positive results. EPA will continue its reform efforts in FY 2003, and will incorporate lessons learned through reforms into its FY 2003 themes of revitalization and one cleanup program.

In FY 2003, the Superfund redevelopment initiative will support the Agency theme of revitalization, coordinating a national effort to facilitate the return of Superfund sites to productive use. EPA is increasingly aware of the importance of fully exploring future use opportunities at Superfund sites with its partners before selecting and implementing a cleanup remedy. As a result, Superfund sites that were once thought to have no future use potential are now being "recycled" back into productive use. EPA has compiled a list of over 260 Superfund sites that have been recycled for numerous purposes. For example, more than 60,000 acres are now in ecological or recreational use at these sites. Additionally, more than 15,500 jobs, representing approximately $500,000,000 in annual income, are located at sites that have been recycled for commercial use. Under this initiative EPA will continue to focus its efforts on the potential reuse of Superfund sites and involve its partners to determine future uses of sites. EPA can then select, design, and implement cleanups that are protective of human health and the environment consistent with chosen future uses. EPA has given communities at 50 pilot sites up to $100,000 in direct financial assistance and/or services. EPA will assess the impacts from these pilots on the Superfund program and their potential to facilitate site reuse following clean-up. By the end of FY 2003, EPA expects to have completed reuse plans for all 50 of the pilot sites.

In an effort to better implement the Agency's Quality Assurance Order (EPA Order 5360.1 A2 May 2000), EPA is enhancing the quality management activities of its Superfund program office. This work entails the implementation of a quality management plan based on the EPA Order. Specific enhancement of standard operating procedures, guidance for the development and application of models, training for quality related activities, and other activities will aid in promoting quality. The quality management plan will initiate a continuing process to improve environmental cleanup decisions. These activities will continue to promote cross program coordination so that Superfund cleanup efforts will reflect increasing progress toward consistency and transparency across programs that is needed to support the goal of one cleanup program. The maintenance of up-to-date standard operating procedures allows EPA to continue to take immediate actions to address Homeland Security threats and other responses that require quality assurance procedures for the collection and assessment of data to support decisions on hazards and cleanup. Finally, these quality assurance activities support revitalization efforts through the establishment of transparent and consistent standards for environmental cleanups.

Activities to establish consistent Quality Assurance processes among EPA, DOD and DOE will continue in FY 2003. An Intergovernmental Data Quality Task Force (IDQTF) has completed

development of a *Uniform Federal Policy for Implementing Quality Systems*. The Task Force is chaired by the Director of the Federal Facilities Restoration and Reuse Office. This policy will form the basis of a DOD-wide quality system and is under consideration as the basis of a DOE-wide system. EPA and DOD are negotiating a Memorandum of Understanding on implementation of the Policy.

The IDQTF has also released a draft *Uniform Federal Policy for Quality Assurance Project Plans* and requested review and comments from DOD, DOE, the Association of State and Territorial Solid Waste Management Officials, and EPA Headquarters and Regional offices. The Task Force feels the use of this policy will promote consistency and uniformity in planning data collection. The anticipated results include improved data quality and cost and time savings in the future. While these policies are based on a national consensus standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs (ANSI/ASQC E-4)*, agreement between Federal agencies to adopt specific procedures is a new and innovative approach in the quality arena. These initiatives will also support compliance with the guidance issued by the Office of Management and Budget on January 3, 2002 entitled "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by Federal Agencies."

Federal Preparedness and Homeland Security

In support of Homeland Security, the Environmental Response Team Center West (ERTC-West) will provide emergency response resources to support FBI-led response teams in a terrorism event; response action includes threat assessment, site evaluation and removal actions, agent identification, hazard detection and reduction, environmental monitoring, decontamination and long term site restoration. ERTC-West will provide technical assistance in hazardous material emergencies, radiation emergencies and enforcement of environmental regulations. ERTC -West will also provide technical assistance on remedial actions for immediate and long-term activities at oil spill sites and for designing and implementing plans for monitoring air, water and sensitive habitats. ERTC-West will maintain an emergency response activation system to assist the EPA Western Regions and program offices in responding to environmental emergencies and uncontrolled oil and hazardous wastes sites. The ERTC-West will also conduct training for Federal, state and local government officials and private industry representatives in the latest oil and hazardous substance response technology.

In alignment with the Agency's Homeland Security program, EPA supports a highly effective national emergency preparedness and response capability. Under the National Response Team (NRT)/Regional Response Teams (RRTs) and the Federal Response Plan (FRP), the Federal government helps states and cities address major incidents that are beyond their capabilities. EPA chairs the NRT, co-chairs the 13 RRTs throughout the U.S. and is the lead agency for Emergency Support Function 10 (hazardous materials) under the FRP. The NRT/RRT integrates the actions of all Federal partners (comprised of 16 Federal agencies) to prevent, prepare for and respond to hazardous substance, and terrorist attacks that involve hazardous substances and weapons of mass destruction releases.

In the aftermath of the terrorist attacks of September 11 and the subsequent anthrax incidents nation-wide, EPA demonstrated its leadership as head of the NRT. EPA's Superfund Program OSCs responded to New York at Ground Zero within hours of the attack to monitor for contaminants in the air and water, assist in the management of wastes and conduct cleanup and decontamination; these operations have been sustained for months by drawing on EPA's response resources from throughout the country. OSCs were also present at the Pentagon to provide technical assistance to the first responders. EPA has also been involved in the assessment and decontamination of numerous sites and facilities contaminated with anthrax including the congressional office buildings on Capitol Hill and has provided substantial technical support to the United States Postal Service and other Federal facilities at anthrax sites across the country.

The FRP provides for the coordination of Federal operations and the delivery of Federal assistance to states to help them deal with the consequences of significant disasters, including terrorist acts. The FRP is also linked to national security and Homeland Security requirements defined by Presidential Decision Directives (PDDs), including:

- *Continuity of Operations (COOP) Program.* The Presidential Decision Directive (PDD) #67 requires all Federal Executive Branch departments and agencies to have in place a viable capability to ensure the performance of their essential functions during any emergency or situation that may disrupt normal operations. During FY 2003, EPA will conduct individual and team training, testing of alert and notification procedures, and an internal headquarters exercise at the designated alternate facility to enhance the operational capabilities of the Agency's COOP team. One key lesson learned from the September 11 attacks was the importance of alternate facilities for regional operations, since EPA's Region 2 office was severely affected for weeks after the World Trade Center incident. The Agency will refine all its COOP plans (Headquarters and Regional) and examine the capabilities of, and upgrade Headquarters and Regional alternate facilities.

- *Critical Infrastructure Protection.* PDD #63 requires EPA (and other Federal agencies) to strengthen Agency and stakeholder defenses against assaults on critical infrastructures, including cyber systems. The EPA is working with the Critical Infrastructure Assurance Office (CIAO) within the Office of Homeland Security to identify its critical infrastructure under Project Matrix. Project Matrix will also identify interrelationships of EPA's assets with critical infrastructure of other Federal departments and agencies. The Agency will take appropriate action to minimize potential threats to its critical infrastructure and to minimize the impact of any attack. Among the areas of interest to CIAO as probable critical infrastructure, as demonstrated by their reaction to the September 11 attacks and the anthrax exposures, are EPA's hazardous waste response resources, both response personnel and equipment.

- *Homeland Security Emergency Preparedness.* PDDs #39 and #62 define Federal agency roles during responses to terrorist attacks. EPA is directed to provide technical support to the FBI during the crisis management phase and to be the lead agency for mitigation of environmental hazards during the consequence management. In implementing this responsibility, EPA integrates prevention, preparedness and response actions within the

National Response System and coordinates with and provides assistance to state Emergency Response Commissions and Local Emergency Planning Committees.

In FY 2002, the Homeland Security supplemental budget provided EPA with resources to increase response capability and capacity with additional preparedness and response personnel, equipment and training for Regional and Headquarters programs. In FY 2003 the Agency will continue to develop its Homeland Security preparedness and response program to provide a national capacity to respond to incidents of terrorism. EPA efforts will focus its efforts on the following key areas:

- Operating of a West Coast Environmental Response Team (ERT). The ERT is EPA's center of expertise for environmental emergency response, providing state-of-the-art air monitoring, hazard assessment and remediation science and engineering services to EPA regional offices and other Federal response agencies. EPA's existing ERT is based on the East Coast with a small branch in the midwest. The West Coast ERT will allow the Agency to provide critical rapid response support to regions in the western part of the country.

- Enhancing the readiness capabilities of EPA's responders to handle the risks associated with chemical, biological and radiological substances.

- Providing advanced training to all OSCs and other Federal, state and local responders to deal with the added dangers of chemical, biological, and radiological terrorist incidents.

- Developing and implementing an agency-wide exercise program focused on terrorism preparedness and response that will include all regions, Headquarters, and ERT to ensure that Standard Operating Procedures (SOPs), training, and equipment are tested and validated. This program will also enhance EPA's mandatory participation in interagency terrorism exercises, such as TOPOFF II, a government-backed Homeland Security exercise.

- Purchase state of the art response equipment for EPA OSCs and response contractors (e.g., personal protection, field analysis, monitoring, decontamination, and communications equipment).

- Assist state and local emergency managers to include terrorism in local emergency response plans. At the Federal level participate as a full Federal partner to the Office of Homeland Security in developing a cohesive national Homeland Security strategy. This includes working with other Federal Agencies to coordinate national preparedness efforts and participate in National Security Special Events.

Radiation Guidance and Support

In 2003, EPA will provide national level guidance on the risks posed by radioactive materials in the environment including technical guidance for conducting risk assessments in order to limit public and environmental exposure to radiation. EPA will accomplish this by working with the

public, industry, states, tribes and other government agencies to use information systems and to inform and educate people about radiation risks and promote actions that reduce human exposure. EPA, in partnership with other Federal agencies, will promote the management of radiation risks in a consistent safe manner at Superfund, DOE, DOD, state, local and other Federal sites by:

- Evaluating human health and environmental risks from radiation site exposure, developing models of the environmental transport of radionuclides, and providing a basic understanding of the biological effects of radiation.
- Developing risk assessments, remediation technologies, and measurement and information systems.
- Providing training and direct site assistance including laboratory, field and risk assessment support at sites with actual or suspected radioactive contamination.
- Develop and participate in Homeland Security training exercises and other preparedness activities
- Represent EPA in Homeland Security international and national planning meetings.

The radiation program also maintains an on-going capability to provide radio analytical and mixed waste analytical data on environmental samples to support site assessment and cleanup activities. Finally, EPA coordinates with other nations on select radiological issues, including risk assessment methodologies and risk management approaches.

Superfund Enforcement

The Superfund enforcement program is critical to the Agency's ability to cleanup the vast majority of the nation's worst hazardous waste sites. In FY 2003, EPA will continue its successful emphasis on completing construction at Superfund sites by obtaining commitments from PRPs to conduct new remedial actions at non-Federal facility sites and ensuring Federal facility with CERCLA agreements.

The Superfund enforcement program has successfully encouraged or compelled PRPs to undertake or fund approximately 70% of new remedial construction work at non-Federal facility Superfund sites in recent years. The program focuses on the following efforts: 1) maximizing PRP participation in conducting or funding response actions while promoting fairness in the enforcement process; 2) recovering costs from PRPs when EPA expends funds from the Superfund Trust Fund; and 3) negotiating agreements with Federal facilities for NPL site cleanup.

The Superfund program emphasizes "enforcement first" to ensure that sites for which there are viable responsible parties are cleaned up by those parties. In tandem with this approach, various Superfund reforms are being implemented to increase fairness, reduce transaction costs and promote economic redevelopment. The Agency provides funding to the Department of Justice (DOJ) through an interagency agreement (IAG) to assist EPA Superfund in enforcement efforts.

The Superfund program and its stakeholders have benefitted from enforcement reforms implemented in recent years. These reforms include undertaking early, expanded PRP searches and investigations to enable "enforcement first" to occur and develop sufficient information to make

orphan share determinations; making orphan share offers at all eligible sites; expediting negotiations to facilitate early de minimis settlements; settling with parties with limited ability to pay; making more effective and widespread use of Alternative Dispute Resolution (ADR); issuing administrative orders to the maximum practicable number of PRPs at a given site; and creating site-specific special accounts.

In FY 2003, the Agency will negotiate remedial design/ remedial action cleanup agreements at sites and will also achieve removal agreements at hazardous waste sites. Where negotiations fail, the Agency will take either unilateral enforcement actions to require PRP cleanup or use Trust Fund dollars to remediate sites. When Trust Fund dollars are used to cleanup sites, the program will take cost recovery actions against PRPs to recover expenditures.

Institutional controls are a critical component of many response actions selected by EPA to ensure that property is used and maintained in an appropriate manner after construction of the selected cleanup is complete. The Superfund program will oversee the implementation and enforcement of institutional controls following the completion of construction. Furthermore, response work will be undertaken, in accordance with existing agreements or through additional negotiations, when found to be necessary through five year reviews.

EPA will continue its efforts in Federal facilities administrative activities related to CERCLA § 120 agreements. CERCLA § 120 requires that for all Federal facility sites on the NPL an IAG be signed by all appropriate parties which provide enforceable schedules for the progression of the entire cleanup. For Federal facility NPL sites, the signing of an IAG and oversight of its implementation ensures a protective cleanup at a timely pace. EPA will monitor milestones in existing IAGs, resolve disputes, and oversee all remedial work being conducted by Federal facilities. EPA will work with affected agencies to resolve outstanding policy issues relating to the cleanup of Federal facilities. For FY 2003, EPA will initiate negotiations for an IAG at 100% of Federal facility Superfund sites within 18 months after final listing on the NPL.

In FY 2003, the Superfund cost recovery program will recover monies expended from the Trust Fund from viable responsible parties. Where settlement negotiations and previous enforcement actions have failed to achieve PRP response, and Trust Fund dollars are used to cleanup sites, the program will take cost recovery actions against PRPs to recover expenditures. By pursuing cost recovery settlements, the program promotes the principle that polluters should pay cleanup costs at sites where they caused or contributed to the contamination and maximizes the leverage of the Trust Fund to address future threats posed by contaminated sites. Trust Fund expenditures will be recouped through administrative actions, CERCLA § 107 case referrals, and through settlements reached with the use of alternative dispute resolution.

The enforcement program's involvement in case referrals and support include case development and preparation, referral and post-filing actions. The program will also provide case and cost documentation support for the docket of cases currently being worked on by DOJ. The enforcement program will meet cost recovery statute of limitation deadlines, resolve cases, and issue bills for oversight and make collections in a timely manner.

Other Federal Agencies

Other Federal agencies contribute to the Superfund program by providing essential services in areas where EPA does not possess the needed specialized expertise. Contributors include the Department of Interior, the National Oceanic and Atmospheric Administration, the Federal Emergency Management Agency, the Occupational Safety and Health Administration, the United States Coast Guard. Some of the essential services performed by these Federal agencies include the following: 1) The Department of Interior provides response preparedness and management activities (assistance on incidents and sites and training on natural resource issues) that support the National Response System including the National Response Team, Regional Response Teams, OSCs, and Remedial Project Managers (RPMs); provides trustee assistance and damage assessment capability activities that increase the capability of Federal, state and Indian Tribe trustees to assess damages for natural resources injured or lost as a result of hazardous substances releases; and provides scientific support to develop ways to include natural resource restoration in removal actions and 2) FEMA provides technical assistance to OSCs and supports the National Contingency Plan and the National Response System through preparedness exercises; develops and coordinates training programs for state and local governments through participation on the National Response Team and Regional Response Teams; provides financial assistance for hazardous materials training exercises; and maintains regional libraries for hazardous material training information.

Overview of Other Federal Agency Funding

Agency	FY 2002 Enacted	FY 2003 Request
DOI	$997,800	$997,800
FEMA	$1,097,600	$1,097,600
NOAA	$2,444,600	$2,444,600
OSHA	$648,600	$648,600
USCG	$5,487,900	$5,487,900
TOTAL	$10,676,500	$10,676,500

Brownfields

Brownfields are abandoned, idled, or under-used industrial and commercial properties where expansion or redevelopment is complicated by real or perceived contamination. Brownfields properties are not traditional Superfund sites as they are not generally highly contaminated and present lesser health risks. However, economic changes over several decades have left numerous communities with these contaminated properties and abandoned sites. In fact, the General Accounting Office has estimated that over 450,000 brownfields properties exist. Concerns about environmental liability and cleanup, infrastructure declines, and changing development priorities have worsened the situation. The primary goal of the EPA Brownfields program is to provide states, Tribes and local governments with the tools and financial assistance to assess, clean up, and redevelop brownfields properties. The Agency's FY 2003 request includes an additional $102,000,000 investment in brownfields, which provides for new and supplemental assessment grants, Brownfields cleanup revolving loan fund (BCRLF) grants, cleanup grants, funding directly to states and Tribes to support the state voluntary cleanup programs, and targeted assessments.

Increased funding will allow for more funds to be leveraged, more jobs to be created, and more grants to receive assistance each year. By the end of FY 2003, 456 assessment grants will have been awarded, with 74 new and 52 supplemental newly announced that fiscal year. In FY 2003, 33 BCRLF grants will be funded for up to $1,000,000 per eligible state, Indian Tribe or local government entity to clean up brownfields sites and, for the first time, cleanup grants will be awarded up to $200,000 per site. It is estimated that cleanup funding might be available for up to 25 sites combined with the BCRLF grant programs.

The Small Business Liability Relief and Brownfields Revitalization and Environmental Restoration Act (H.R. 2869), has authorized, for the first time, the cleanup of petroleum sites. The $30,000,000 requested increase would clean up a portion of the estimated 200,000 abandoned petroleum tanks found at sites. This represents a great opportunity for the Administration to address a major regulatory gap in the current Brownfields program created by Superfund's petroleum exclusion. These resources would support approximately 50 communities to assess and clean up abandoned gas stations within their Brownfields areas in conjunction with the current brownfields

assessment and cleanup programs.

The Agency provides funding for site assessment demonstration grants of up to $200,000 each. Recently, EPA has made supplemental funding available to a small subset of these grants, who have accomplished a high number of assessments, cleanups and redevelopments. These grants provide EPA, states, local governments, and Federally recognized Indian Tribes with useful information and new strategies for promoting a unified approach to environmental site assessment and characterization, and redevelopment. EPA has awarded 399 two year assessment grants to communities to assist localities in assessing contamination at brownfields sites. These grants include supplemental, greenspace and Showcase assessment-related activities. More than 2,600 properties have had environmental assessments completed under the assessment program since program inception. In FY 2003, the Agency will continue to fund grants. EPA designed this assistance to enhance state, local and Tribal governments' capacity to assess and cleanup properties under state and Federal environmental authorities, and facilitate the redevelopment and reuse of the properties. To date, grants have leveraged over 17,000 cleanup, construction and redevelopment jobs.

Where appropriate, the Agency provides funding for targeted assessments in communities that are not successful in competing for an assessment grant. Site assessments at non-grant Brownfields sites are performed either under existing cooperative agreements with states or through EPA contractors. This activity enjoys wide support from cities and other local communities. This funding provides preliminary assessments and site investigations using standard methodologies established by the American Society for Testing Materials.

To continue EPA's efforts to provide a pattern of interagency collaboration in addressing environmental and economic issues in communities, the Agency and its Federal partners designated 12 new showcase communities in 2001 for a total of 28 showcase communities. These designated Brownfields showcase communities are distributed across the country and vary by size, resources, and community type. The goals of the project are to: promote environmental protection and restoration, economic development, job creation, community revitalization, and public health protection through assessment, cleanup and sustainable reuse of brownfields; link Federal, state, local and non-governmental action supporting community efforts to restore and reuse ; and develop national models demonstrating the positive results of public and private collaboration in addressing brownfields challenges.

The Agency will also award cooperative agreements to capitalize BCRLF grants of up to $1,000,000 each. All communities with properties are eligible to apply. EPA offers grants to governmental entities which may discount loans to nonprofit or other government entities. This funding enables eligible entities to develop cleanup strategies, make loans to prospective purchasers to clean up properties, and encourages communities to leverage other funds into their revolving loan fund pools. In addition, the Agency awards brownfields job training and development grants at up to $200,000 over two years to help residents of brownfields communities take advantage of new jobs created by the assessment and cleanup of brownfields.

Funding to support enhancement and development of state and Tribal voluntary cleanup programs (VCPs) has been increased and continues to be a priority in the Agency's attempt to reuse and redevelop properties. EPA provides both monetary and technical/legal assistance to states and Tribes developing and enhancing VCPs. VCPs address contaminated sites which do not require Federal action, but need cleanup before the sites are considered for reuse. EPA believes that building strong and effective state and Tribal programs, such as VCPs, will also complement efforts to address the cleanup of brownfields properties. To date, EPA has signed 18 memoranda of agreement that clarify that the oversight of brownfields cleanups will be the responsibility of the states with programs which meet the six criteria established in the November 1996 voluntary cleanup guidance.

Over the past five years, states, territories, and Tribes have received over $85,000,000 for assessment demonstration and BCRLF grants, voluntary cleanup programs, and targeted brownfields assessments.

By funding the increased level of grants in FY 2003, a commensurate increase in leveraged investments and jobs in FY 2004 and 2005 will be expected. By the end of FY 2005, the brownfields grants should leverage close to $7 billion and 25,300 jobs in cleanup, construction, and redevelopment with 3,850 properties assessed, given continued economic conditions.

To implement this legislation, the enforcement program will undertake several key activities, such as : issuing regulations describing "all appropriate inquiry"; reviewing site-specific requests from prospective purchasers, contiguous landowners, and other parities; and, developing guidance describing certain federal enforcement actions restrictions at brownfields sites being addressed under state response programs.

Base Realignment and Base Closure

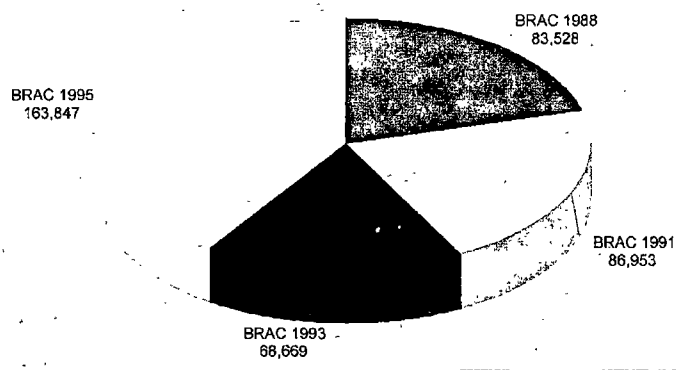
Since 1993, EPA's Superfund Base Realignment and Base Closure (BRAC) program has worked with the Department of Defense (DOD) and the states' environmental programs to achieve the Agency's goal of "making property environmentally acceptable for transfer, while protecting human health and the environment" at realigning, closing or closed military installations. These activities complement Agency themes of one cleanup program and revitalization. Between 1988 and 1995, 497 major military installations representing the Army, Navy, Air Force, and Defense Logistics Agency were slated for realignment or closure. Of these 497 BRAC installations, 204 require some type of environmental restoration. Of the installations requiring environmental restoration, 108 have been designated as Fast-Track installations. The four rounds of BRAC are generally referred to as BRAC 1988, BRAC 1991, BRAC 1993, and BRAC 1995, indicating the year in which each cluster of military installations were selected for realignment or closure.

The Fast-Track program strives to make parcels available for reuse as quickly as possible by transfer of uncontaminated or remediated parcels, by lease of contaminated parcels where cleanup is underway, or by "early transfer" of contaminated property. Since 1993, EPA and DOD have addressed lease-related concerns at BRAC sites by preparing findings of suitability to lease or

transfer that summarize any and all environmental information upon which DOD relies while establishing environmental restrictions in leases on property conveyances necessary to protect human health and the environment. According to DOD's recent FY 2002 BRAC Cleanup Plan Abstract Analysis to Congress, of the 390,270 acres planned for transfer or lease under the BRAC Fast-Track program, 31 percent (122,351 acres) of the acres were transferred by the end of FY 2000 and 16 percent (62,315 acres) leased. The majority of BRAC acres planned for transfer from DOD are intended for non-Federal entities. A major success for the Fast-Track program is the formation of base cleanup teams (BCTs) at the Fast-Track designated installations. The teams, which include environmental experts from EPA, DOD, and states, engineer common sense approaches to cleanups by developing common goals and priorities. The Agency empowers the team to integrate base reuse priorities while making decisions to expedite the process of accelerating cleanup. To further assist with Fast-Track cleanups, EPA engages in public participation by working with DOD to establish restoration advisory boards (RABs) at military installations. RABs foster teamwork by bringing members of the community together with military officials and government regulators to discuss cleanup issues.

Acres to Transfer out of DoD by BRAC Round

(Source DoD's FY 2002 BRAC Cleanup Plan Abstract Analysis to Congress)



The current EPA/DOD Memorandum of Understanding which provides support to EPA for the Base Realignment and Closure Fast-Track Cleanup program, expires on September 30, 2002. Although the President's Budget Blueprint contemplates additional BRAC rounds, the Agency's focus is meeting the requirements of the existing BRAC bases and putting those facilities back into productive reuse. EPA and DOD are currently discussing the Agency's future involvement in the BRAC program.

Resource Conservation and Recovery

For decades, many industrial facilities in this country mismanaged their hazardous wastes. The Superfund program addresses some of these facilities, particularly those that have been abandoned or closed. A significantly larger number, however, fall under the Resource Conservation and Recovery Act (RCRA) corrective action program that EPA and the authorized states administer. Currently, thirty-nine states and territories are authorized to implement the corrective action program. These include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial facilities must undergo a cleanup under the RCRA program. Out of these facilities, the Agency has targeted over 1,700 facilities as high priority – where people or the environment are likely to be at significant current or future risk. The Agency is pursuing a strategy for addressing the worst facilities first, as reflected in the Agency's annual performance goal. This focus on near- term actions which will mitigate actual or imminent human exposure problems and stop further spread of contaminants in the environment has resulted in over 600 of the 1,700 target facilities achieving their environmental indicator goals. The RCRA corrective action program supports the Agency's one cleanup program theme.

Over the past several years, the Agency has been successful in implementing administrative reforms that streamlined the corrective action program and improved overall implementation. The reforms have been effective in changing the way program implementors and stakeholders interact, which has had a positive impact on moving facilities toward cleanup goals. Given the many challenges of meeting the environmental indicator targets, looking toward final cleanup, taking advantage of redevelopment opportunities, and cleaning up Federal facilities, maintaining strong partnerships with all relevant stakeholders will continue to be a priority for the program in FY 2003.

Despite the success of the administrative reforms to date, there remain enormous challenges to for the corrective action program. Groundwater issues present very specific challenges, for example, the extent and severity of the contamination, complex technical issues, and the expense of groundwater cleanups. Also, many of the high priority facilities that have not yet met the environmental indicator goals are extremely large and complicated sites that may not make progress in cleanups at the same pace as those facilities that have already met the goals. These issues, as well as others related to defining "completion" of cleanup and implementing institutional controls, have surfaced during stakeholder meetings EPA hosted across the country in 2001. EPA will continue working in partnership with the stakeholders to further explore these areas. Although the reforms the Agency has implemented to date help address these larger challenges in part, there will be a need for continued administrative improvements.

In FY 2003, the Agency will continue to stress meeting the environmental indicator goals, but will also place added emphasis and resources on moving facilities toward final cleanup. This means working in partnership with the authorized states and the regulated community to resolve some very challenging policy and technical issues, such as those associated with setting final cleanup goals for groundwater, indoor air exposures, and groundwater-to-surface water pathways. Since there is not a one-size-fits-all approach to cleanups, close working partnerships will allow all parties to fully explore flexible, common sense approaches.

In support of the revitalization theme, the Agency will capitalize on the results of the RCRA Showcase Pilots conducted in 2001 and 2002, applying the lessons learned on a wider scale in order to facilitate redevelopment of RCRA brownfields sites. By sharing the innovations demonstrated through those pilots, others may learn of new approaches that are appropriate for or adaptable to their situations. The Agency will target other sites and surrounding communities with focused attention and access to RCRA Brownfields expertise. EPA will continue the Targeted Site Effort (TSE) and the RCRA Brownfields program to help "break the logjams" at sites that have significant redevelopment/reuse potential. The efforts undertaken to date have influenced a culture change whereby, in many cases, facility owners or operators, and the communities pursue redevelopment as a primary objective of the cleanups. In FY 2003, EPA will continue to advance that perspective by promoting and implementing its Revitalization Initiative.

In FY 2003, the Agency will continue to devote special attention to Federal facilities permitted under RCRA. The Agency and the authorized states have worked with our Federal partners to more effectively communicate cleanup goals and facilitate Federal facilities' cleanups. For example, the Agency will foster dialogue with the authorized states and the Federal facility community to explore such topics as innovative approaches to cleanups and regulatory flexibility. Lessons learned through pilot programs in other industries will be applied to Federal facilities, leading to greater efficiencies in cleanups.

Training and outreach are integral parts of the corrective action program's activities. The way program implementors and the regulated community do business, and the way in which the public participates in cleanup decisions being made in their communities has been positively influenced through the reforms. The Agency will build on the changes in culture that have started to happen, promoting flexibility in program implementation so that people can do what makes the most sense in a given situation, and encouraging more frequent communications among all parties.

In addition, EPA is requesting $8,000,000 for the assessment and potential remediation of Homestake mine in the State of South Dakota to be funded within the STAG appropriation.

Research

This research supports the Agency's objective of reducing or controlling potential risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. Research related to hazardous substances (Superfund), leaking underground storage tanks (LUST), and oil spills fall within this objective.

Hazardous substance research focuses on improving scientific understanding of the potential human health and ecological risks that may be posed by contaminated groundwater, soils, and sediments, including: 1) the presence of highly toxic site contaminants, such as heavy metals, persistent bioaccumulative toxics (PBTs), and volatile organic chemicals; 2) the potential for multiple routes of exposure; and 3) the large number of contaminated sites, many of which cover large areas, resulting in high exposure (particularly to ecosystems). Contamination of groundwater and sediments in the riparian zone (i.e., river and stream banks) is also of considerable concern due to its importance to humans and ecosystems. The extent and geological, biological and chemical

complexity of many of these sites present uncertainties when determining risk, as well as in finding accurate, low-cost techniques for site characterization and remediation.

Groundwater, Soils and Containment

The Agency supports an integrated research program of exposure, risk assessment, and risk management in order to understand the processes that govern contaminant transport and fate, and to assess and develop remediation and characterization/monitoring technologies, especially their cost-effectiveness.

In FY 2003, exposure research will include non-invasive geophysical techniques that provide methods of subsurface site characterization and contaminant evaluation, yielding a greater ability to make sound waste management decisions. Significant effort will be directed toward experiments at a unique field test facility for evaluating these technologies under dense non-aqueous phase liquid (DNAPL) controlled-spill conditions. A major product in FY 2003 will be a report on the use of borehole dielectric techniques for the detection of non-aqueous phase liquids, above and below groundwater at contaminated waste sites.

Exposure research will also focus on the improved collection of soils contaminated with volatile organic compounds (VOCs). This research will examine VOC releases due to sample disturbance, compositing soils contaminated with VOCs, improved soil gas sampling techniques, and the quality of common analytical methods for VOCs in soils. In FY 2003, work will continue on a prototype device for sampling VOCs from contaminated soils around Superfund sites. This device will greatly increase the accuracy of VOC measurements in soils by minimizing losses during sample collection and shipment.

Other exposure research will develop and apply advanced instrumentation for soils, sediments, and groundwater characterization and monitoring that focuses on methods to provide high-quality data rapidly with simple and rugged protocols. Emphasis will be on technologies that can be used to perform analysis in the field, determine pollutants that are intractable by conventional methods, and improve risk assessments by providing specific information on the most hazardous forms of pollutants. Pollutants of primary interest are polyaromatic hydrocarbons (PAHs), chlorinated organics, and toxic metals. In FY 2003, EPA will produce electrochemical techniques to characterize and speciate Chromium III and VI. These methods will provide rapid and cost-effective analytical tools for Superfund site managers, regional offices, and other stakeholders.

Risk assessment research focuses on both human and ecological health and aids in the determination of risk management options as well as characterization of contaminants. Human health research involves developing methodologies, models, and factors that enable risk assessors to develop more accurate quantitative estimates of the likelihood of harm that may result from various contaminated media. Major areas of emphasis for FY 2003 will include: developing statistical distributions for exposure factors (home gardening is a new area); further refining and validating the biokinetic models for lead and other toxic metals; developing better models and methods for dermal exposure; and completing health and exposure assessments for specific contaminants.

Ecological risk assessment research develops methodologies and factors that can enable ecological risk assessors to estimate the amount of soil-borne contamination that will be biologically "available" to wildlife. In FY 2003, this research will continue to develop ecological soil screening values for common soil contaminants. These screening values will enable the Agency to make prompt decisions about what levels of contamination are not harmful to human health and/or ecosystems.

The Agency's risk management research in this area will address priority remediation problems in groundwater and soils, helping to reduce human health and ecosystems exposure to hazardous materials in soils and groundwater by making remediation more efficient and cost-effective. This research evaluates and improves existing remediation techniques as well as develops new clean-up processes.

In the area of groundwater remediation research, the Agency plans to continue work on characterizing DNAPL source zones and on treatment and natural attenuation of inorganic contamination. DNAPLs are a major cause of organic groundwater contamination for which there are few effective commercialized remediation options. Research will also continue on the use of DNAPL-extracting techniques for cleanup processes, as well as on approaches to site cleanup combining multiple treatment processes for site remediation.

Research will continue on the remediation of dissolved inorganic plumes, particularly toxic metals, and related source areas. Field studies on monitored natural attenuation (MNA) of dissolved metals will continue, as will studies of the application of permeable reactive barriers (PRBs) to contaminants such as arsenic and mercury. Major areas of emphasis in FY 2003 will be a multi-agency report of the long-term performance of PRBs; applying PRBs effectively to other contaminants and environments; and improved methods for solid-phase characterization in support of MNA.

In FY 2003, containment research will include work on caps, covers, and vertical barriers for the vadose zone (i.e., the transition zone between the land surface and the water table), as well as fixed barriers and pumping methods for containing contaminated plumes. Research will also include work on data collection and assessment of mature containment systems and long term performance monitoring needs. Guidance documents will be developed to provide information for new construction. Work is expected to be brought to a close on alternative cover system (e.g., vegetative) assessment.

Contaminated Sediments

The Agency has created an integrated research program on contaminated sediments addressing risk assessment, exposure, effects, and risk management issues. This program addresses priority research needs for the assessment and cleanup of sites.

This research will focus on four important goals distilled from recommendations made by the National Academy of Sciences and EPA's Science Advisory Board and in accordance with the Contaminated Sediments Science Plan: (1) develop scientific models and protocols that better define

the risks to human health and the environment; (2) develop new cleanup alternatives and methods that better evaluate which cleanup alternatives would be most effective; (3) develop techniques and conduct monitoring to document the actual performance of cleanup technologies; and (4) develop better methods and tools to increase community involvement in cleanup activities.

EPA will initiate activities on dermal contact and fish ingestion exposure pathways. Estimates will be made of the amount of sediment that may come into contact with skin from various activities. Exposure models and factors will be developed that accurately predict the amount of contaminated fish and game that might be consumed. Of particular interest are the fish-eating habits of sensitive sub-populations such as subsistence fishermen, certain ethnic groups, and disadvantaged communities.

In FY 2003, research will also investigate the effects of contaminated sediments on the environment, aiding in the development of risk assessments. Efforts will focus on sediments contaminated with persistent, bioaccumulative toxics (PBTs) in the context of the three primary remediation options: natural attenuation, capping, and dredging. Approaches will be developed that predict the biological uptake of chemicals from sediments, movement through the food web, and the effects on top predator fish and fish-eating wildlife. To understand the ecological significance of potential toxic effects, the impacts on critical populations of fish-consuming species will be assessed. These efforts will include understanding the effects of both freshwater and marine contaminated sediments.

Contaminated sediments risk management research will study currently available remediation options, such as dredging and disposal facilities, natural attenuation, and capping. This work will expand and additional sites will be studied to understand the cost-effectiveness and short- and long-term ecological impacts of these options. Contaminants of focus include polychlorinated biphenyls (PCBs), PAHs, and metals. In addition, bench and field work will be conducted on innovative techniques for contaminated sediments cleanup. This work will provide EPA and other stakeholders with better information for making scientifically sound cleanup decisions.

Research will be strengthened or expanded to provide improved and cost-effective monitoring and characterization techniques for sediments to more accurately determine contaminant types, locations, and concentrations. This will provide for improved assessment of risks and risk management approaches. Work will also continue to evaluate existing contamianted sediment fate and transport models.

Research on community involvement will focus on developing ways to measure community preferences and ways to incorporate societal/cultural values into the decision-making process.

Superfund Innovative Technology Evaluation (SITE), Hazardous Substance Research Centers (HSRCs), Oil Spills, and Leaking Underground Storage Tanks (LUST)

Research to reduce or control risks to human health from contaminated sites is also conducted through the Superfund Innovative Technology Evaluation (SITE) program and the Hazardous Substance Research Centers (HSRCs) program. Additionally, the Agency supports

efforts to reduce or control risks from oil spills and leaking underground storage tanks.

The SITE program fosters the development and use of lower cost and more effective characterization technologies and risk management remediation technologies for sediments, soils, and groundwater. The goal of this program is to identify, demonstrate, assess, and distribute information about innovative and alternative environmental technologies to developers, remediation site managers, and regulators, yielding more efficient characterization and remediation processes. In FY 2003, the Agency will initiate studies of technologies dealing with priority remediation problems, including sediments, DNAPLs, and Brownfields. The annual SITE program report will be produced, providing information to Congress and the public/private sectors on field evaluation results.

In FY 2003, the Agency will also continue to support the Hazardous Substance Research Centers (HSRCs): five multi-university centers focusing on different aspects of hazardous substance management. They bring together researchers from a variety of disciplines to collaborate on research projects of high importance to the Agency (e.g., contaminated sediments).

In FY 2003, oil spills research will involve the development of an oil spill model applicable to near-coastal water and options to clean up fuel and chemical spills on navigable waterways. Efforts will result in an interim report on adapting the oil spill model for Orimulsion (TM) and vegetable oil modeling. Research will also focus on the use of bioremediation on inland waterways spills, improving chemical countermeasures, and evaluating the fate of non-petroleum products (e.g., vegetable oils) spilled on surface waters. Studies will be conducted on fuel mixtures spilled in freshwater and marine environments to understand their fate. An international cooperative study of dispersed oil and non-petroleum oil degradation in cold climates will also be initiated.

Leaking underground storage tanks (LUST) corrective action research looks at cleanup processes for fuels and fuel oxygenates, like methyl tertiary butyl ether (MTBE). This work results in a better understanding of naturally occurring subsurface processes that degrade fuel components; reliable indicators to measure natural attenuation; and models and resource documents to predict the likelihood of site-specific natural attenuation effectiveness. Studies on modeling of contaminant transport and fate, and on oxygenate degradation processes will be integrated to better understand how oxygenates behave in the subsurface. Emphasis will be on developing inexpensive techniques that can be implemented in the near-term to address MTBE-contaminated sites. These studies will provide improved understanding of natural processes that affect MTBE. A report on ex situ treatment of fuel oxygenates will be produced, and work will begin on the development of models for problems resulting from LUST sites.

Homeland Security

The recent events in the aftermath of September 11, 2001 demonstrate the need for a coordinated Federal, state and local response to a wide variety of biological and chemical threats. EPA will provide guidance, technical expertise and support to Federal, state and local governments and other institutions on building contamination (chemical and biological) prevention, treatment and cleanup activities. EPA will conduct the needed research and develop the scientific expertise to

support this effort. The Agency has the expertise and hands-on knowledge to undertake research to evaluate, develop and test technologies and approaches for building decontamination from chemical and biological incidents including those for detection, pre-decontamination assessment, and post-decontamination monitoring. The research would be planned in consultation with the appropriate Agency offices and would include the technology transfer of the verified technologies to the Emergency Response Teams.

Examples of needed research include:

- Technologies for rapid detection and measurement of contaminants to support pre- and post-cleanup monitoring and assessment, worker protection, risk assessment, and early warning of contamination events.
- Technologies for building decontamination including: surface removal/disinfection, air cleaning/filtration, and decontamination of internal drinking water systems, HVAC duct work, etc.
- Technologies and management practices for debris removal, decontamination of clean up equipment, and decontamination and disposal of debris and clean up disposables.
- Development of contaminant transport and fate models for buildings and rapid risk assessment approaches for cleanup operations.
- Implementation of a decontamination technology verification center under the EPA Environmental Technology Verification (ETV) Program to rapidly test and verify the performance effectiveness of newly developed private sector technologies.
- Initiation of a technology transfer program to rapidly disseminate research and technology performance information to emergency response organizations in the form of best practices, design and operational guidance, training, software and other appropriate vehicles.

FY 2003 Change from FY 2002 Enacted

EPM:

- (+$26,455,500 and +139.6 FTE) Redirection of resources from Superfund to EPM and increase of resources to implement the Brownfields infrastructure projects and categorical grants authorized under the new Brownfields legislation.

- (-$3,300,000, -5.0 FTE) Resources for the FY 2002 Homeland Security supplemental, used for one-time equipment purchases and emergency preparedness training, are not continued in FY 2003.

- (-$98,000) Decrease reflects transfer of the Ombudsman to Goal 10.

- (-$550,000) The FY 2003 request is $550,0000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

- (+$5,660,900) Resources, dollars and FTE, associated with rent are allocated in proportion

to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent. -$3,569,400. utilities: +$3,468,000, Security. -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Superfund:

- (-$94,813,500, -76.6 FTE) Redirection of the Agency's Brownfields resources from Superfund to the EPM and STAG appropriations.

- (+$10,000,000 and +20 FTE) This increase in EPA's Homeland Security program will enhance the skills of the current response workforce to respond to terrorist incidents. Specific efforts include: Establishing a West Coast Emergency Response Team to provide specialized expertise and support to OSCs in the western regions of the country. Additionally, EPA will deliver advanced training, conduct a national EPA event planning/response exercise and purchase state-of-the-art response equipment.

- (-$29,000,000) Reduction in support to Homeland Security response investment from FY 2002 Emergency Supplemental level. Primary reductions are to numbers of planned regional response personnel, equipment purchases, and training for Federal and state/local responders.

- (-$294,000) Decrease reflects transfer of the Ombudsman to Goal 10.

- (-$3,000,000) The FY 2003 request is $3,000,000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

- (-$5,660,900) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400. utilities: +$3,468,000. Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

LUST

- (-$773,000) Decrease reflects funding of the LUST appropriation to match FY 2002 President's budget level.

STAG

- (+170,500,000) Resources provided for Brownfields infrastructure projects and categorical grants authorized under the new legislation

- (+$8,000,000) Resources provided for assessment and potential remediation of Homestake mine in the State of South Dakota.

- (-$3,000,000) The FY 2003 request is $3,000,0000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

Research

S&T

- (-$5,265,000) The FY 2003 Request is $5,265,000 below the 2002 Enacted budget due to the Congressional earmarks received during the appropriations process which are not included in the 2003 President's Request.

- (-$1,000,000) This reduction reflects a one-time accounting adjustment resulting from the Inspector General's audit decision on a grant to Clark Atlanta University.

Superfund

- (+$73,125,000) This reflects $75,000,000 in new funding, less the 2.5% tap ($1,875,000) mandated by the Small Business Innovative Research statute and shifted to Goal 08, Objective 04. The $73,125,000 will be applied toward new research focusing on Homeland Security issues such as transfer of technologies and guidance on decontamination processes for buildings, evaluating existing and new cleanup and detection technologies, developing risk assessment methodologies, and producing rapid decontamination techniques and technologies for cleanup of contaminated buildings. These research efforts are critical in order to prevent and respond to future instances of bioterrorism.

- (+$650,000) This increase represents a refocusing of work to risk management research targeted at contaminated sediments issues from work that is being brought to a close on soil remediation activities.

- (-$650,000) This represents a refocusing from work that is being brought to a close on soil remediation activities to risk management research targeted at contaminated sediments issues.

- (-$1,152,700) This represents a realignment of Minority Programs from the Superfund (Goal 5, Objective 1) appropriation into the Science and Technology appropriation (Goal 8, Objective 3). This will enhance the program by allowing for a broader scope of work to be done.

Annual Performance Goals and Measures

Leaking Underground Storage Tank Cleanups

In 2003 EPA and its partners will complete 22,500 Leaking Underground Storage Tank (LUST) cleanups for a cumulative total of approximately 313 300 cleanups since 1987

In 2002 EPA and its partners will complete 22 000 Leaking Underground Storage Tank (LUST) cleanups for a cumulative total of approximately 290,000 cleanups since 1987

In 2001 19,074 LUST cleanups were completed in FY 2001

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
LUST cleanups completed	19,074	22 000	22 500	cleanups

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

Superfund Removal Response Actions

In 2003 Conduct 275 Superfund removal response actions for a cumulative total of 7,138 removal response actions since 1982

In 2002 Conduct 275 Superfund removal response actions for a cumulative total of 6,863 removal response actions since 1982

In 2001 EPA conduced 302 removal response actions, for a cumulative total of 6,588 over the life of the program

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Removal response actions	302	285	275	removals
Amount of liquid based waste removed		no target	no target	gallons
Amount of solid waste removed		no target	no target	cubic yards

Baseline EPA completed a total of 6,286 removal response actions from 1982 through 2000

Superfund Cleanups

In 2003 EPA and its partners will complete 40 Superfund cleanups (construction completions)

In 2002 EPA and its partners will complete 40 Superfund cleanups (construction completions) 47 construction completions were completed in FY 2001

In 2001 EPA completed construction at 47sites, achieving 804 construction completions over the life of the program

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Construction completions	47	40	40	completions

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

Superfund Cost Recovery

In 2003 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000

In 2002 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000

In 2001

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Refer to DOJ, settle or write off 100% of Statute of Limitations (SOLs) cases for SF sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered	97 8	100	100	Percent

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

Superfund Potentially Responsible Party Participat

In 2003 Maximize all aspects of PRP participation which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process

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

In 2001

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Ensure fairness by making Orphan Share Offers at 100% of all eligible settlement negotiations for response work	100			Percent
Provide finality for small contributors by entering into De Minimis settlements and report the number of settlers	15			Settlements
PRPs conduct 70% of the work at new construction starts	67 3	70	70	Percent

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

RCRA Corrective Action

In 2003 257 (for a cumulative total of 1,252 or 73%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 1,054 or 61%) of high priority RCRA facilities will have groundwater releases controlled

In 2002 172 (for a cumulative total of 995 or 58%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 882 or 51%) of high priority RCRA facilities will have groundwater releases controlled

In 2001 EPA exceeded its RCRA corrective action goal for human exposures controlled with an additional 179 facilities, and came close to achieving its goal for groundwater releases controlled with an additional 154 facilities

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
High priority RCRA facilities with human exposures to toxins controlled	179	172	257	facilities
High priority RCRA facilities with toxic releases to groundwater controlled	154	172	172	facilities

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

Brownfield Site Assessment Grants

In 2003 EPA will provide additional site assessment funding to 74 new sites, and to 52 existing sites resulting in a cumulative total of 3,350 properties assessed, the generation of 21,300 jobs, and the leveraging of $5.0 billion in cleanup and redevelopment funds since 1995

In 2002 EPA will provide additional site assessment funding to 38 new communities and to 38 existing communities resulting in a cumulative total of 3,100 properties assessed, the generation of 19,300 jobs, and the leveraging of $4.0 billion in cleanup and redevelopment funds since 1995

In 2001 FY 2001 third quarter data shows cumulative totals of 2,594 site assessments generation of 17,307 jobs and leveraging of $3.7 billion in cleanup and redevelopment funds.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Cumulative leveraging of cleanup and redevelopment funds	$3.7 B	$4.0 B	$5.0 B	funds leveraged
Cumulative jobs generated	17,307	19,300	21,300	jobs generated
Cumulative site assessments	2,594	3,100	3,350	assessments

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

Brownfield Community Support

In 2003 EPA will provide funding for 30 communities to capitalize revolving loan funds for a cumulative total of 182, provide funding for 10 job training pilots for a cumulative total of 66 and 70% of graduates placed in jobs and support 28 existing Showcase Communities

In 2002 EPA will provide funding for 28 communities to capitalize revolving loan funds for a cumulative total of 152, provide funding for 10 job training pilots for a cumulative total of 56 and 70% of graduates placed in jobs, and support 28 existing Showcase Communities

In 2001 46 communities capitalized 23 new and append 2 existing revolving loan funds EPA awarded 12 additional showcase community designations, supporting a total of 28 showcase communities Additionally, EPA awarded 9 new job-training pilots

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Showcase communities	28			communities
Communities served by cooperative agreements to capitalize revolving loan funds	46			agreements
Job training pilots	9			pilots
Cumulative communities served by cooperative agreements to capitalize revolving loan funds		152	182	communities
Cumulative job training pilots		56	66	pilots
Cumulative showcase communities		28	28	communities
Percentage of trainees placed		70	70	percent

Baseline By the end of 2000 EPA signed 104 agreements for capitalization of revolving loan funds awarded 37 job training pilots and provided continued support to 16 showcase communities

Superfund Intermediate Cleanup Indicators

In 2003 EPA will increase the number of Superfund hazardous waste sites with human exposures and migration of contaminated groundwater under control

In 2002 EPA will increase the number of Superfund hazardous waste sites with human exposures and migration of contaminated groundwater under control

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Superfund hazardous waste sites with human exposures controlled		no target	10	sites
Superfund hazardous waste sites with groundwater migration controlled		no target	10	sites

Baseline In FY 2001, EPA established a preliminary baseline of 1450 final and deleted NPL sites to monitor for human exposures under control 1126 (78%) of these 1450 sites have human exposures under control In FY 2001 EPA established a preliminary baseline of 1204 final and deleted NPL sites to monitor for migration of contaminated groundwater under control 745 (61%) of these 1204 sites have contaminated groundwater migration under control

Tribal Cleanup Assistance

In 2003 Complete 45 Leaking Underground Storage Tank (LUST) cleanups in Indian Country for a cumulative total of 617 cleanups since 1987

In 2003 EPA will continue to emphasize increasing the number of Indian tribes participating in the Superfund program as expressed through the number of tribes supported by Superfund cooperative agreements with tribes and intertribal consortia

In 2002 Complete 40 Leaking Underground Storage Tank (LUST) Cleanups in Indian Country for a cumulative total of 572 cleanups since 1987

In 2002 EPA will continue to emphasize increasing the number of Indian tribes participating in the Superfund program, as expressed through the number of tribes supported by Superfund cooperative agreements with tribes and intertribal consortia

In 2001 30 LUST cleanups were completed in Indian Country in FY 2001

In 2001 FY 2001 accomplishments in Indian Country include 11 site assessments, support to 78 tribes through 27 cooperative agreements, provision of $3 8M for capacity building, and tribal leadership or support in responding to 26% of Superfund sites impacting Indian Country

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
LUST cleanups in Indian Country	30	40	45	cleanups
Site assessments (PA/SI) conducted in Indian country	11	no target	no target	assements
The number of tribes supported by cooperative agreements with tribes/intertribal consortia	78	no target	no target	agreements
Funding provided for building tribal capacity	$3 8M	no target	no target	funding
Percentage of Superfund sites impacting Indian country where a tribe is involved as either the lead or support agency	26	no target	no target	involvement

Baseline EPA completed a total of 532 LUST cleanups in Indian Country from 1987 through 2001 The baseline for Superfund activities is currently under development

Homeland Security

In 2003 EPA will complete the remaining 27 critical facility vulnerability assessments, prioritize the risks associated with each facility, and begin mitigation

In 2003 EPA will improve its overall homeland security readiness capability by 20% by performing enhanced training and exercises and

providing state-of-the-art equipment Percentage improvement will be determined by an annual readiness survey and inspections

In 2002 Establish a baseline of overall homeland security readiness capabilities through an annual survey mechanism

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Percentage improvement in homeland security readiness			20	percent
Percentage of LEPCs that have incorporated homeland security prevention and planning into community contingency plans		no target	no target	percent
Percentage of states that have incorporated homeland security planning into state response systems		no target	no target	percent

Baseline Based on FY 2002 performance, baseline is zero for number of critical Agency facilities that have had vulnerability assessments

Homeland Security

In 2003 EPA will complete the remaining 27 critical facility vulnerability assessments, prioritize the risks associated with each facility and begin mitigation

In 2003 EPA will improve its overall homeland security readiness capability by 20% by performing enhanced training and exercises and providing state-of-the-art equipment Percentage improvement will be determined by an annual readiness survey and inspections

In 2002 Establish a baseline of overall homeland security readiness capabilities through an annual survey mechanism

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of vulnerability assessments performed			27	Assessments

Baseline Based on FY 2002 performance baseline is zero for number of critical Agency facilities that have had vulnerability assessments

Research

Scientifically Defensible Decisions for Site Clean

In 2003 To ensure cost-effective and technically sound site clean-up, deliver state-of-the-art guidance and methods to EPA and stakeholders for risk management of fuel oxygenates, organic and inorganic contamination of sediments ground water and/or soils and oil spills

In 2002 Provide at least 6 innovative approaches that reduce human health and ecosystem exposures from DNAPLs and MTBE in soils and groundwater and from oil and persistent organics in aquatic systems

In 2002 Provide new soil sampling methods, soil contaminant screening levels for chemicals that pose ecological risks, and generate specific statistical distributions for factors used in human health exposure assessments

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Interim report on monitored natural attenuation in sediments	1			document
Progress report on Field Demonstration of Chemically-Enhanced Subsurface Dense, Non-Aqueous Phase Liquid Extraction Technologies	1			report
Publish a technical Resource Document on the bioremediation of oil spills on marine shorelines Provide oil spill response teams with a tool to assess appropriate applications of bioremediation	1			document
Deliver the Annual SITE Program Report to Congress	0			report
Annual SITE Program report to Congress detailing 4-6 innovative approaches, their cost savings and future direction, reports summarizing pilot scale evaluation of in-situ remedies for solvents		1	1	report
Report on children's soil ingestion rates derived from environmental and biological measurements of arsenic		1		report
Report on ecotoxicity soil screening levels for mammals, birds, soil plants, and soil biota for use in ecological risk assessments at Superfund sites		1		tech report
Report Permeable reactive barriers for ground water remediation, Incorporating the results of long-term performance studies in remedy selection for contaminated sites			1	report

Baseline Deliver state-of-the -art guidance and methods to EPA and other stakeholders for risk management of fuel oxygenates, organic and inorganic contamination of sediments, ground water and/or soils, and oil spills to ensure cost-effective and technically sound site clean-up Baseline There are a number of contaminants and/or media at Superfund Leaking Underground Storage Tank (LUST) sites that are difficult to clean up. Methyl tert-Butyl Ether (MTBE) a fuel oxygenate found increasingly in US ground water/drinking water, requires clean up to low (ppb) levels but clean-up is expensive because of its chemical, physical and biological properties Polynuclear aromatic hydrocarbons (PAH) are found at wood preserver sites and gas manufacturing plants contain carcinogenic components and are difficult to cost-effectively clean up due to their high molecular weight Arsenic (As) in ground water requires clean up to low levels due to its impacts on humans and ecological systems As treatment systems which perform for long periods of time are needed We also need to understand the reasons why ground water As concentrations may naturally reduce over time Bulk shipment/storage of non-petroleum oils (e.g vegetable oils) can result in spills/leaks that have significant impacts on fresh water and marine environments Inexpensive techniques are needed to clean up these spills without doing further harm to the environment Research involving pilot and full scale treatment testing/demonstrations is particularly important when addressing these research needs because such research will lead to near-term options for effective, reasonable-cost clean-ups

Verification and Validation of Performance Measures
Performance Measure (PM): LUST cleanups completed.

Performance Database: EPA does not maintain a national database for this information.

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

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

Data Quality Reviews: None.

Data Limitations: This process relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Performance Measure (PM): Superfund construction completions.

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

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

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

Data Quality Review: Two audits, one by the Office of the Inspector General (OIG) and the other by the General Accounting Office (GAO), were done to assess the validity of the data in CERCLIS. The OIG audit report "Superfund Construction Completion Reporting" (No. E1SGF7-05-0102-8100030) was prepared to verify the accuracy of the information that the Agency was providing to Congress and the public. The OIG report concluded that the Agency "has good management controls to ensure accuracy of the information that is reported," and "Congress and the public can rely upon the information EPA provides regarding construction completions." GAO's report, "Superfund Information on the Status of Sites (GAO/RECD-98-241)," estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95% of the sites.

Data Limitations: No data limitations have been identified.

New/Improved Data or Systems: In 2003, the Agency will continue its efforts begun in 1999 to improve the Superfund Program's technical information by incorporating more site remedy selection, risk, removal response, and community involvement information in CERCLIS. Efforts to share information among the federal, state, and tribal programs to further enhance the Agency's efforts to efficiently identify, evaluate and remediate Superfund hazardous waste sites will continue. In 2003, the Agency will also establish data quality objectives for program planning purposes and to ascertain the organization's information needs for the next five years. Adjustments will be made to EPA's current architecture and business processes to better meet the need.

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

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program. RCRAInfo contains information on entities (generically referred to as "handlers") engaged in hazardous waste (HW) generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRAInfo has several different modules, including a Corrective Action Module that tracks the status of facilities that require, or may require, corrective actions A "yes" or "no" entry is made in the database with respect to meeting corrective action indicators. Supporting documentation and reference materials are maintained in regional and state files.

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

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

QA/QC Procedures: States and Regions generate the data and manage data quality related to timeliness and accuracy (i.e., the environmental conditions and determinations are correctly reflected by the data). Within RCRAInfo the application software enforces structural controls that ensure that high-priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line, provides guidance to facilitate the generation and interpretation of data. Training on use of RCRAInfo is provided on a regular basis, usually annually, depending on the nature of systems changes and user needs.

Data Quality Reviews: GAO's 1995 Report on PA's Hazardous Waste Information System reviewed whether national RCRA information systems support meeting the primary objective of helping EPA and states manage the hazardous waste program. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states

Data Limitations: No data limitations have been identified. As discussed above, environmental indicator determinations are made by the authorized states and EPA regions based on a series of standard questions and entered directly into RCRAInfo. EPA has provided guidance and training to states and regions to help ensure consistency in those determinations. High priority facilities are monitored on a facility-by-facility basis and the QA/QC procedures identified above are in place to help ensure data validity.

New/Improved Data or Systems: EPA has successfully implemented new tools for managing environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo. RCRAInfo allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, such as facility status, regulated activities, and compliance history. The system also captures detailed data on the generation of hazardous waste from large quantity generators and on waste management practices by treatment, storage, and disposal facilities. RCRAInfo is web accessible, providing a convenient user interface for federal, state and local managers, encouraging development of in-house expertise for controlled cost, and using commercial off-the-shelf software to develop reports from database tables.

Performance Measure (PM): Brownfields Cumulative site assessments; Brownfields Cumulative jobs generated; Brownfields Cumulative leveraging of cleanup and redevelopment funds.

Performance Database: The Brownfields Management System (BMS) is used to evaluate environmental, and economics-related results, such as properties assessed, acres cleaned up, and jobs generated. BMS uses data gathered from Brownfield pilots' quarterly reports and from the EPA regions. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) records regional accomplishments on brownfields assessments in the Brownfields module. This database module tracks Targeted Brownfields Assessments (TBAs) on a property-specific basis. This module contains information such as: the property's operational status (e.g., "Active" or "Inactive"), prior use (e.g., "Disposal," "Production Facility," or "Midnight Dump"), the actual start and completion dates for the TBA, the phase of the TBA, and the outcome

or result of the TBA.

Data Source: EPA headquarters and regional staff enter data on a rolling basis. Data are derived from grant recipient reports on Pilot and Targeted Brownfields Assessment projects.

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

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

Data Limitations: The reporting of results of the Brownfields pilots is subject to the Paperwork Reduction Act and attendant OMB regulations governing information collection requests (ICR's), as well as the Agency's assistance regulations. Consequently, the Agency is limited to obtaining information from assessment pilot recipients on specific accomplishments attained with grant funds, such as properties assessed (40 CFR 35.6650(b)(1)). In addition, EPA may not require private sector entities, which do not receive EPA financial assistance, to provide information relating to such accomplishment measures as redevelopment dollars invested or numbers of jobs created. These constraints may lead to an underreporting of accomplishments.

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

Performance Measure (PM): Refer to DOJ, settle, or writeoff 100% of Statute of Limitations (SOLs) cases for Superfund sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.

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

Data Source: Automated EPA system; headquarters and EPA regional offices enter data into CERCLIS

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are

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

Data Quality Review: The IG annually reviews the end-of-year CERCLA data, in an informal process, to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: None

New/Improved Data or Systems: None

FY 2003 Congressional Performance Measure (PM): PRPs conduct 70 percent of the work at new construction starts.

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

Data Source: Automated EPA system; headquarters and EPA regional Offices enter data into CERCLIS

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund/Oil Implementation Manual (SPIM), the program management manual that details what data must be reported; 2) Report Specifications, which are published for each report detailing how reported data are calculated; 3) Coding Guide, which contains technical instructions to such data users as regional Information Management Coordinators (IMCs), program personnel, report owners, and data input personnel; 4) Quality Assurance (QA) Unit Testing, an extensive QA check against report specifications; 5) QA Third Party Testing, an extensive test made by an independent QA tester to ensure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan, which includes: a) regional policies and procedures for entering data into CERCLIS, b) a review process to ensure that all Superfund accomplishments are supported by source documentation, c) delegation of authorities for approval of data input into CERCLIS, and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature that has been added to

CERCLIS so that changes in past fiscal year data can be changed only by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG annually reviews the end-of-year CERCLA data, in an informal process, to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: None

New/Improved Data or Systems: None

Research

Verification and Validation of Performance Measures

FY 2003 Congressional Performance Measure (PM): Provide the SITE Program Report to Congress

Performance Database: Program output, no internal tracking system

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Reviews: Report

Data Limitations: N/A

New/Improved Data or Systems: N/A

Coordination with Other Agencies

LUST

EPA, with very few exceptions, does not perform the cleanup of leaking underground storage tanks (LUST). States and territories use the LUST Trust Fund to administer their corrective action programs, oversee cleanups by responsible parties, undertake necessary enforcement actions, and pay for cleanups in cases where a responsible party cannot be found or is unwilling or unable to pay for a cleanup. Most states have cleanup funds that cover the majority of owners and operators' cleanup costs. These state funds are separate from the LUST Trust Fund.

State LUST programs are key to achieving the objectives and long-term strategic goals. Except in Indian Country, EPA relies on state agencies to implement the LUST program, including overseeing cleanups by responsible parties and responding to emergency LUST releases. LUST cooperative agreements awarded by EPA are directly given to the states to assist them in

implementing their oversight and programmatic role.

Superfund

The Superfund program coordinates with many other Federal and state agencies in accomplishing its mission. Executive Order 12580 delegates certain authorities for implementing Superfund to other Federal agencies. Many of these agencies perform, in close consultation and coordination with EPA, essential services in areas where the Agency does not possess the specialized expertise. Currently, the Agency has active interagency agreements with the Department of Interior (DOI), the National Oceanic and Atmospheric Administration (NOAA), the Federal Emergency Management Agency (FEMA), the Occupational Safety and Health Administration (OSHA), and the United States Coast Guard (USCG).

These agencies provide numerous Superfund related services such as supporting the national response system by providing emergency preparedness expertise and administrative support to the national response team and the regional response teams; conducting compliance assistance visits to review site safety and health plans and developing guidelines for assessing safety and health at hazardous waste sites; conducting outreach to states, Indian Tribes and Federal natural resource trustee officials regarding natural resource damage assessments; providing scientific support for response operations in EPA's regional offices; assisting in the coordination among Federal and state natural resource trustee agencies; supporting the Superfund program in the management and coordination of training programs for local officials through the Emergency Management Institute and the National Fire Academy; and responding to actual or potential releases of hazardous substances involving the coastal zones, including the Great Lakes and designated inland river ports; and litigating and settling cleanup agreements and cost recovery cases. In addition, the Agency coordinates with the United States Army Corp of Engineers (USACE), states, and Tribes in the identification and cleanup of approximately 9,100 FUDs nationwide. Expectations are that the Agency will play an even greater role at these sites in the future.

USACE and the Bureau of Reclamation contribute to the cleanup of Superfund sites by providing technical support for the design and construction of many remediation projects through site-specific interagency agreements. These Federal partners have the technical design and construction expertise and contracting capability needed to assist EPA regions in implementing most of Superfund's high-cost Fund-financed remedial action projects. These two agencies also provide technical on-site support to regions in the enforcement oversight of numerous construction projects performed by PRPs.

The Superfund response and Federal Facilities enforcement programs work closely with other Federal agencies (e.g., DOD, DOE, DOI, etc.) to clean up their facilities under the Superfund program. EPA also works with states and Indian Tribes as key partners in the cleanup decision-making process at Superfund Federal sites.

The Agency also works in partnership with state and Tribal governments to strengthen their hazardous waste programs and improve the efficiency and effectiveness of the nation's overall hazardous waste response capability. EPA assists the states in developing their CERCLA

implementation programs through infrastructure support, financial and technical assistance, and training. Partnerships with states increase the number of site cleanups, improve the timeliness of responses, and make land available for economic redevelopment sooner, while allowing for more direct local involvement in the cleanup process.

The focal point for our Federal preparedness efforts is EPA's role in the National Response System, which coordinates chemical emergency preparedness and response at the Federal, state and local levels. Within this structure, EPA chairs the multi-agency National Response Team, and co-chairs Regional Response Teams that oversee national, regional, and area spill emergency planning. In addition, the Agency plays a leadership role in crisis management and Homeland Security requiring participation in a number of inter-agency workgroups. The Environmental Response Team Center West (ERTC-West) will provide emergency response resources to support FBI-led response teams in a terrorism event; response action includes threat assessment, site evaluation and removal actions, agent identification, hazard detection and reduction, environmental monitoring, decontamination and long term site restoration. ERTC-West will maintain an around-the-clock emergency response activation system to assist the EPA Western Regions and program offices in responding to environmental emergencies and uncontrolled oil and hazardous wastes sites. The ERTC-West will also conduct training for Federal, state and local government officials and private industry representatives in the latest oil and hazardous substance response technology.

Under the National Contingency Plan and the Federal Radiological Emergency Response Plan, EPA will assist the regions, states and other Federal agencies in responding to radiological emergencies. EPA will provide technical assistance and guidance on all radiation Superfund Emergency Response matters and will also offer field monitoring expertise, mobile radiochemical analysis, and dose and risk assessment support, and develop Protective Action Guidance for use by state/local authorities in protecting their populations. EPA will perform radiological lab analyses that provide data on radiation levels and risks and will make enhancements to the Environmental Radiation Ambient Monitoring System which collects data across all fifty states and the American Territories for drinking and groundwater samples, and air and milk analysis.

EPA partners with other Federal agencies, state and local governments, and private industry to fulfill Superfund program priorities when a site is radioactively contaminated. Under CERCLA, radioactively contaminated sites are addressed in a manner consistent with how chemically contaminated sites are addressed, accounting for the technical differences. The Radiation program provides radiological scientific and technical expertise and leadership in evaluating projects and providing field and laboratory support.

Brownfields

The Brownfields National Partnership represents a significant investment in brownfields communities from more than 20 Federal agencies. Federal resources include additional brownfields pilots from EPA; redevelopment funds from the Department of Housing and Urban Development and the Economic Development Agency; planning funds from the Economic Development Agency and job training efforts from the Department of Labor and the National Institute of Environmental Health Sciences.

The centerpiece of the Brownfields National Partnership is the funding of 28 brownfields showcase communities which began in FY 1998. The Showcase communities were selected to receive brownfields assistance from various agencies including EPA, Department of the Interior, Department of Justice, many of those previously mentioned, as well as General Services Administration and the National Oceanographic and Atmospheric Administration. EPA and these other Federal agencies will continue to provide active support for brownfields activities across the country in FY 2003. EPA's commitment to the Showcase project was to award additional assessment and demonstration pilots and fund an Intergovernmental Personnel Act staff in 27 of the 28 communities. To augment the success of the Brownfields National Partnership and its efforts to clean up and redevelop brownfields properties, the Agency and its Federal partners will revitalize the partnership in FY 2003 by entering into new Memoranda-of-Understanding.

The Brownfields program also relies on partnership building with local government, state, and non-government groups to leverage Federal funding with private sector funding. As part of the brownfields initiative, EPA will continue to provide outreach, curriculum development, job training, and technical assistance to community residents through cooperative agreements to community-based organizations, community colleges, universities, and private sector non-profit groups. To date, Brownfields pilots have leveraged over 12,000 cleanup, construction and redevelopment jobs. The Agency also works with cities, states, Federally recognized Indian Tribes, community representatives, and other stakeholders to implement the many commitments. Successful brownfields redevelopment is proof that economic development and environmental protection go hand in hand.

The Brownfields program has demonstrated that cleaning up abandoned or under-used contaminated land can have significant payoffs. Building on the pilot program, EPA will continue to partner with other Federal, state, local, and private sector efforts to restore contaminated property to economic reuse. With the requested increase in FY 2003, EPA will provide funding to 74 new assessment pilot cooperative agreements and support 52 existing brownfields assessment pilot cooperative agreements, provide technical assistance to 28 existing brownfields showcase communities, provide support to 30 new communities to capitalize revolving loan funds, provide brownfields communities with targeted brownfields assessments (TBAs), and award 10 additional job training pilots. The Agency will also provide information and tools and develop model practices and policies to be used by local governments, developers, and transportation officials in their pursuit to redevelop brownfields properties.

RCRA

The Agency maintains a close relationship with the state agencies that are authorized to implement the Resource Conservation and Recovery Act (RCRA) corrective action program. EPA expects states to achieve the same level of Federal standards as the Agency, including annual performance goals of human exposures and groundwater releases controlled. As part of the state grant process, Regional offices negotiate with the states their progress set in meeting the corrective action program objectives of the GPRA goals.

Encouraging states to become authorized for the RCRA Corrective Action program remains a priority. Currently, thirty-nine states and territories have the authority to implement the program. EPA expects several additional states to gain authorization in the next one to two years. EPA also encourages states to use alternate (non-RCRA) authorities to accomplish the goals of the corrective action program. These include state Superfund and voluntary programs.

The RCRA Corrective Action program also coordinates closely with other Federal agencies, primarily the Department of Defense and Energy, that have many sites in the corrective action universe. Encouraging Federal Facilities to meet environmental indicators remains a top priority.

Research

EPA expends substantial effort coordinating with other agencies to conduct risk management and assessment research. These activities include work with the Department of Defense (DOD) in their Strategic Environmental Research and Development Program and the Environmental Security Technology Certification Program, the Department of Energy (DOE), and the Office Health and Environmental Research. EPA also conducts collaborative field demonstrations (e.g., through the SITE program) and laboratory research with DOD. DOE, and the Department of Interior (particularly the U.S. Geological Survey - USGS) to improve characterization and risk management options for dealing with subsurface contamination. Collaborations with external organizations provide the Agency with more opportunity to understand and address a variety of complex waste/site characterization and remediation problems and, consequently, improve the Agency's ability to meet its objective of quicker and more cost-effective site cleanups.

Other research efforts involving coordination include: the unique controlled-spill field research facility that was designed in cooperation with the U.S. Bureau of Reclamation. Also, geophysical research experiments and development of software for subsurface characterization and detection of contaminants are being conducted with the USGS and DOE's Lawrence Berkeley National Laboratory. These experiments include the use of a controlled spill unit in which solvents can be spilled and their subsequent movement is monitored using experimental ground penetrating radar, borehole dielecrtic techniques, complex resistivity, seismic techniques, and eletromagnetic techniques.

The USGS also has a number of programs, such as the Toxic Substances Hydrology Program, that support studies related to contamination of surface water and groundwater by hazardous materials. Groundwater modeling of MTBE is being conducted in collaboration with New York State activities to clean up sites. Also, Remediation Technology Development Forums (RTDFs) on such topics as bioremediation, metal treatment, and contaminated sediments have been formed to conduct collaborative research programs addressing priority technical issues.

The Agency is also working with the National Institute of Environmental Health Sciences (NIEHS) to advance fundamental Superfund research. NIEHS manages a large basic research program focusing on Superfund issues. The program is mandated in CERCLA, which establishes a "basic university research and education program" in NIEHS, and further reinforced in the Superfund Amendments and Reauthorization Act (SARA). Also in conjunction with a CERCLA

mandate, the Agency for Toxic Substances and Disease Registry (ATSDR) was established to provide critical health-based information to assist EPA in making effective cleanup decisions.

The Rapid Commercialization Initiative (RCI) is a Federal/state/private cooperative effort to expedite the application of new environmental technologies. Participating Federal agencies include the Department of Commerce, DOD, DOE, and EPA. Participating states and state organizations include the California Environmental Protection Agency, Southern States Energy Board, and the Western Governors Association.

Statutory Authorities

- Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657
- Defense Base Closure and Realignment Act of 1990, and the Defense Authorization Amendments and Base Realignment and Closure Act (BRAC) of 1990, Section 2905(a)(1)(E) (10 U.S.C. 2687 Note).
- Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
- Oil Pollution Act 33 U.S.C.A.
- Community Environmental Response Facilitation Act (CERFA)
- National Environmental Policy Act (NEPA)
- Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970
- Uranium Mill Tailings Radiation Land Withdrawal Act of 1978
- Public Health Service Act, as amended, 42 U.S.C. 201 et seq
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121 et seq
- Safe Drinking Water Act, 42 U.S.C. 300F et seq (1974)
- Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980
- Executive Order 12656 of November 1988, Assignment of Emergency Preparedness Responsibilities, 3 CFR, 1988

Research

- Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA)
- Response Conservation and Recovery Act (RCRA)
- Oil Pollution Act (OPA)
- Brownfields Revitalization and Environmental Restoration Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

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

Objective: Regulate Facilities to Prevent Releases

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Regulate Facilities to Prevent Releases	**$160,707.2**	**$165,842.9**	**$167,261.2**	**$1,418.3**
Environmental Program & Management	$97,901.0	$102,477 9	$103,863 6	$1,385 7
Hazardous Substance Superfund	$91 1	$217.1	$226 3	$9 2
Oil Spill Response	$13,678 3	$13 596 0	$14,166 0	$570.0
Science & Technology	$8,730 9	$10,095.3	$9,548 7	($546.6)
State and Tribal Assistance Grants	$40,305 9	$39,456 6	$39,456.6	$0.0
Total Work years	760 3	807.8	800 4	-7 4

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Administrative Services	$1,003.0	$0 0	$0 0	$0 0
Civil Enforcement	$1,264 7	$1,512.0	$1,538 6	$26 6
Community Right to Know (Title III)	$4,861 1	$4,968.4	$4,953 1	($15 3)
Compliance Assistance and Centers	$267.9	$264 8	$271.4	$6.6
Congressionally Mandated Projects	$1 696 3	$2 100 0	$0 0	($2,100 0)
EMPACT	$160.5	$0 0	$0 0	$0.0
Facilities Infrastructure and Operations	$8,350.2	$9,712.1	$10,182 4	$470 3
Hazardous Waste Research	$6,990.0	$9,088 3	$9,548.7	$460.4
Homeland Security	$0.0	$7.0	$0 0	($7.0)
Legal Services	$2,249.0	$2,451 1	$2,633.3	$182.2
Management Services and Stewardship	$1,350.8	$2,135.7	$2,316 8	$181 1
Oil Spills Preparedness, Prevention and Response	$11,948 9	$11,795.4	$12,332.2	$536.8
Project XL	$126.4	$0.0	$0.0	$0 0
RCRA Improved Waste Management	$62,477.7	$61,174.6	$61,860 0	$685 4

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
RCRA State Grants	$27.433.2	$27.538 2	$27,538.2	$0.0
Radiation	$7.355 6	$7.000.5	$7.519 3	$518.8
Regional Management	$150 0	$177 8	$176.4	($1 4)
Risk Management Plans	$8.005.5	$7.202 9	$7.446.0	$243.1
UST State Grants	$11 918.4	$11.918.4	$11.918 4	$0 0
Underground Storage Tanks (UST)	$7.045.8	$6.795 7	$7.026.4	$230 7

FY 2003 Request

Underground Storage Tank Program

The underground storage tanks (UST) program works in partnership with states to prevent, detect and address releases from USTs containing petroleum and hazardous substances In FY 2003, the Agency's goal for the UST program is to protect our nation's groundwater by promoting and enforcing compliance with these regulatory requirements. While the vast majority of the approximately 700,000 active tanks have the proper equipment, significant work remains to ensure UST owners and operators properly maintain and operate these USTs. The Agency's primary role is working with states to promote compliance with spill, overfill, and corrosion protection requirements, and ensuring that leak detection requirements are emphasized as a national priority. The Agency's role extends to all federally regulated UST systems, including those on private and public property, tribal lands, and federal facilities.

Continuing to improve owners' and operators' compliance with the UST regulations is one of the Agency's national initiatives. The Agency will build upon its work with states to achieve improved compliance and to develop national and Regional compliance targets through FY 2005 with the goal of achieving improved compliance in each state every year. The Agency will work with states to obtain commitments to increase their inspection and enforcement presence if state-specific targets are not met. The Agency and the states will use innovative outreach and education tools such as multi-site agreements with Federal, state, municipal, Tribal, or private UST owners to bring more tanks into compliance. An example of a multi-site agreement is when a single tank owner with multiple sites agrees to bring all sites into compliance and keep them in compliance. The Agency will also provide technical assistance tools, improved guidance and training to owners, operators and inspectors to foster improved operational compliance with the requirements.

In FY 2003, the Agency will update available information about the performance of new or upgraded UST systems to determine how well existing systems are preventing and detecting releases, analyze leak autopsy data to quantify the frequency of releases by source and cause, foster long-term efforts to further analyze the performance of UST systems, and identify any needed options for improving performance. While the Federal and state UST requirements have led to substantially improved UST systems and fewer new releases, some releases from newer tanks continue to occur, as reported by the states. Based on a 1998 EPA report to Congress, "National Water Quality Inventory," releases from USTs are the leading cause of groundwater contamination in the country. The presence of methyl-tertiary-butyl-ether (MTBE) in gasoline increases the

importance of preventing and rapidly detecting releases because MTBE cleanup can cost 100 percent more than cleanup involving other gasoline contaminants.

In FY 2003, the Agency will focus its efforts on further evaluating those components or procedures which pose the greatest continued threat to human health and the environment through UST releases or delayed detection of petroleum products, including MTBE The Agency will also begin work to resolve the remaining problems, such as contamination through MTBE releases, through outreach and education, training and guidance, or pursuing regulatory improvements. This work will involve substantial coordination with our state and industry partners, and will likely involve initiating and coordinating various research efforts.

EPA has the primary responsibility for implementation of the UST program in Indian Country. This responsibility requires EPA Regional offices to educate owners and operators about the UST requirements, conduct inspection and enforcement activities, and maintain a database of information on USTs located in Indian Country.

Chemical Emergency Preparedness and Prevention

The Agency's chemical emergency preparedness and prevention program seeks to decrease the risks associated with the manufacture, transportation, storage and use of hazardous chemicals. The program is primarily responsible for implementing the Risk Management Program and General Duty Clause authorities of the Clean Air Act, and the emergency preparedness authorities of the Emergency Planning and Community Right-to-Know Act (EPCRA). The program also implements right-to-know initiatives stemming from EPCRA to inform the public about chemical hazards and supports actions at the local level to reduce risk. The cornerstone of the program is a belief that the operators of facilities who have hazardous chemicals are primarily responsible for the safe handling of those chemicals. In addition, since the risks posed by these facilities are local issues, state and local governments, as well as the community, play a critical role in risk reduction.

All Americans benefit from an effective chemical safety program because hazardous chemical substances are virtually everywhere, and chemical accidents are an ever-present danger. EPA estimates that over 500,000 facilities nationwide have significant quantities of hazardous chemicals subject to EPCRA requirements. The facilities subject to the RMP reported over 1,900 accidents over the past five-year period involving deaths, injuries, significant property/environmental damage and/or evacuations/shelter-in-place.

Assisting Facilities with Their Responsibilities

Section 112(r) of the Clean Air Act requires approximately 15,000 facilities to develop comprehensive RMPs and submit them to EPA, state agencies, and local emergency planning committees (LEPCs). Through this program, Federal, state, and local agencies and the general public have access to large amounts of information on the presence of chemicals in every community and the potential hazards those chemicals present.

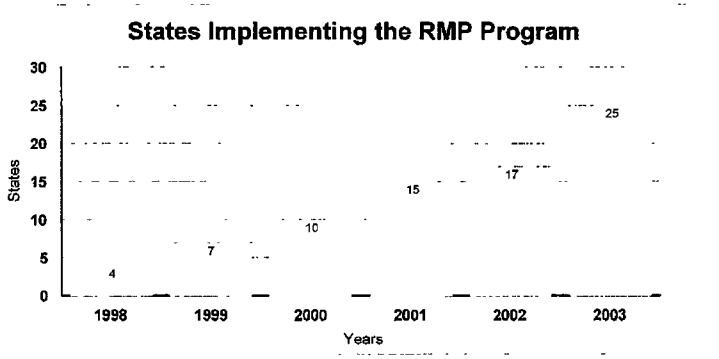
Each RMP identifies and assesses the hazards posed by on-site chemicals. It also provides a

five-year facility accident history and outlines an accident prevention program and an emergency response plan. The statutory deadline for filing RMPs was June 1999. While the numbers are still being tallied, EPA estimates that it will exceed its goal of 90% compliance by the end of FY 2002.

The requirements of the Risk Management Program regulations were built on practices currently used in many industries for process safety management. Each RMP describes the process safety management systems used by a facility for preventing accidents and documents the facilities' compliance with the regulation. A program priority in FY 2003 will be to transition the focus to auditing the quality of the risk management plans submitted while continuing to look for facilities that have not submitted their RMPs.

The Clean Air Act requires EPA to establish a system to audit RMPs. The audit system is used to continuously improve the quality of risk management programs as well as check compliance with the requirements. EPA regional offices will continue to manage RMP programs in those states that have not accepted delegation. In 2003, the Agency and other implementing agencies will perform audit obligations through a combination of desk audits of RMP plans and on-site facility inspections. A total of 300 audits will be conducted during this period. Audit selection will be based upon several criteria, including accident history, patterns of noncompliance, types and quantities of chemicals, and geographic location.

Due to the complexity and large number of RMP audits, EPA is exploring a third party audit program, where EPA would give RMP facilities the option to voluntarily undergo an audit by a qualified third party auditor in exchange for certain regulatory incentives, such as lower future audit



and enforcement priority. Financial incentives may also exist via the participation of insurance company representatives as third party auditors (lower premiums). EPA intends to have the third party audit program operational in FY 2003.

In FY 2003, in the regulatory area, the program expects to complete the second phase of streamlining EPCRA's reporting requirements and will complete regulatory action on changes

resulting from a statutorily required review of the RMP chemicals list. This review is intended to improve the scientific basis for listing chemicals, and add or delete chemicals based on the technical criteria for listing chemicals under the program.

Building State and Local Capabilities

One of EPA's vital roles is to help communities implement accident prevention and emergency preparedness programs. LEPCs (3,400 established under EPCRA) serve as the focal point for discussions on reducing chemical risks at the local level. Under the EPCRA and RMP programs, LEPCs take chemical inventory information, and information on how facilities are reducing the risk of accidents, and integrate it into their emergency plans and community right-to-know programs. In FY 2003, EPA will support LEPC efforts by providing tools, technical assistance and guidance to better enable them to use the information to reduce risks. EPA will also continue an initiative to improve and enhance emergency preparedness and prevention in Tribal communities.

EPA, in partnership with states, will promote implementation of the RMP program during FY 2003 (see chart). The Agency believes individual states are best suited to implement the program because they benefit directly from its success and have established relationships with the communities that may be at risk. EPA also believes that as state officials see their facilities achieve compliance, they will become motivated to seek delegation. The Agency will continue to emphasize flexibility in how states will be authorized to receive delegation and eventually implement the RMP program themselves. EPA will work with states to secure agreements to partially implement the RMP program and help them to develop and manage individual program components. In addition to this effort, EPA will provide states a combination of grant assistance, technical support, training, and other outreach services to help them fully develop and receive delegation of the program. The Agency's FY 2003 goal is for eight additional states to manage an RMP program, bringing the total number of authorized states to twenty-five.

In an effort to help implementing agencies, states, and prospective third party auditors acquire or improve skills required to conduct audits, EPA has identified an RMP audit curriculum. The training will be offered extensively throughout the country in FY 2003.

EPA will continue an initiative to analyze data contained in the RMPs. The Agency is examining trends and patterns in such areas as industry sector, facility size, geographic region, and chemicals. In particular, EPA is using epidemiological methods to analyze the RMP's five-year accident history data to explore accident risk factors and precursors.

Continuous Learning to Improve Safety

In FY 2003, EPA will continue to initiate ways of improving safety by studying hazards and providing outreach to industry, government and the public to enhance application of chemical safety measures. The program focuses on lessons learned from accidents and issues case studies and chemical safety alerts to reduce the risk of future accidents.

Relationship with Chemical Safety Board

The independent Chemical Safety Board (CSB) places responsibilities on the Agency with regard to chemical safety and accident prevention. The same Clean Air Act provisions that established the CSB requires EPA to respond to the Board's recommendations and provide support for its activities. EPA has completed a memorandum of understanding with the Board that delineates each agencies' role and working relationship. In FY 2003 EPA expects to continue activities of responding to CSB recommendations that result from investigations. For example, EPA is currently working with the Occupational Safety and Health Administration and the CSB on two recommendations associated with reactive chemical process safety arising from the Morton International chemical accident in New Jersey.

Oil Spills

The goal of the oil spill program is to protect public health and the environment from hazards associated with a discharge or substantial threat of a discharge of oil into navigable waters, adjoining shorelines, and exclusive economic zones of the United States. Based on data obtained from the National Response Center, each year more than 24,000 oil spills occur in the United States, over half of them within the inland zone over which EPA has jurisdiction. On average, one spill of greater than 100,000 gallons occurs every month from approximately 465,000 EPA-regulated oil storage facilities and the entire oil transportation network. Oil spills contaminate drinking water supplies; cause fires and explosions; kill fish, birds, and other wildlife; destroy habitats and ecosystems; and impact the food chain. There are also serious economic consequences of oil spills because of their impact on commercial and recreational uses of water resources and cleanup costs.

The oil spill program prevents, prepares for, responds to, and monitors oil spills. EPA protects U.S. waters through oil spill prevention, preparedness, and enforcement activities associated with the 465,000 non-transportation-related oil storage facilities EPA regulates through its pollution prevention program. In addition to its pollution prevention responsibilities, EPA serves as the lead responder for the inland zone for all spills, including non-transportation-related spills from pipelines, trucks, and other transportation systems (regulated by the Department of Transportation). EPA accesses the Oil Spill Liability Trust Fund (OSLTF), administered by the United States Coast Guard, to obtain reimbursement for site-specific spill response activities.

The oil spill program establishes requirements to prevent and prepare for spills at oil storage facilities subject to its regulations. The Oil and Hazardous Substances National Contingency Plan (NCP) is the Nation's blueprint for the federal response to discharges of oil and hazardous substances. The Spill Prevention, Control, and Countermeasures (SPCC) regulation and the Facility

Response Plan (FRP) regulation chiefly compose EPA's regulatory framework. The oil spill program is also responsible for publishing the National Product Schedule and subpart J of the NCP, which is a listing of dispersants, other chemicals, and other spill mitigating devices that may be used during response to oil discharges.

All regulated oil storage facilities must prepare SPCC plans. These facilities range from hospitals and apartment complexes storing heating oil to large tank farms, any oil storage facility with aggregate aboveground storage capacity greater than 1,320 gallons, or underground storage greater than 42,000 gallons (not otherwise subject to the UST program requirements). An additional 600 facilities will be in compliance with SPCC provisions in 2003 as a result of EPA's activities, for a cumulative total of 3,495 facilities since 1997. In addition, certain high-risk oil storage facilities must prepare FRPs to identify and ensure the availability of resources to respond to a worst case discharge, establish communications, identify an individual with authority to implement removal actions, and describe training and testing drills at the facility. In FY 2003, EPA will review a small number of FRPs. These EPA reviews are triggered by a large spill, a spill at a particularly high risk facility, or poor performance during an oil response exercise.

EPA also develops area contingency plans (ACPs), in conjunction with area committees (state, local and Federal officials in a given geographic location). The ACPs detail the responsibilities of various parties in the event of a response, describe unique geographical features of the area covered, and identify available response equipment and its location.

In FY 2003, EPA will continue efforts to revise and implement the SPCC regulation. EPA is planning to revise SPCC regulations, to reflect a more performance-based rule that emphasizes industry standards. This approach would represent a comprehensive overhaul of the basic regulatory structure of the current oil spill prevention program. The Agency anticipates undertaking a new and extensive outreach effort to the regulated community about industry compliance once a new rule is promulgated. The Agency must also train its own workforce of inspectors and other staff to assist in compliance assistance and enforcement of the anticipated revisions. In addition to these prevention efforts, EPA will continue its preparedness efforts by focusing on development of ACPs. Response efforts include evaluating, monitoring and/or responding to all known spills within the inland waterways. Over the past six years (1996-2001), EPA has received and evaluated approximately 56,000 oil spill notifications in the inland zone, served as lead responders at approximately 783 oil spills, and shared response responsibility with another party at approximately 1,145 responses.

Resource Conservation and Recovery

The Agency's Resource Conservation and Recovery Act (RCRA) program accounts for over 6,500 of the facilities addressed by this objective. The RCRA program, working in partnership with states, industry, and Tribes reduces the risk of human exposures to hazardous, industrial nonhazardous, and municipal solid wastes Our most current information shows that each year communities generate approximately 230 million tons of municipal solid waste and that industries generate 40 million tons of industrial hazardous waste (not including wastewater) and more than 7.6 billion tons of industrial nonhazardous waste (including wastewater in surface impoundments).

A combination of regulations, permits, voluntary standards and programs ensure, to the greatest extent possible, safe management of these various wastes. New contaminated waste sites, possibly Superfund sites, could result from mismanagement of these wastes threatening nearby communities. In FY 2003, the RCRA program will focus on improving current waste management practices, providing greater regulatory flexibility and promoting opportunities for converting waste to future energy and raw material sources.

In addition to the overall base program improvements discussed below, EPA looks for opportunities to move the RCRA program into the future in innovative ways. In FY 2003, the Agency will continue to review where it can implement regulatory innovations in partnership with states and the regulated community, such as specific industry sectors, like metal finishing, or academic research laboratories. EPA will be proposing rules to reform the Definition of Solid Waste and will collaborate with Regions and states to clarify or revise existing policy related to hazardous waste recycling. For example, in FY 2003, EPA will promulgate regulations excluding cathode ray tubes from hazardous waste regulation. In FY 2003, the Agency will continue to experiment with projects to pilot test alternative regulatory requirements. For example, EPA will work with New Jersey to promote flexibility in hazardous waste regulation in its Gold Track program. The RCRA program is involved in over 20 XL projects and will monitor their results to determine whether broader regulatory reforms are warranted. EPA expects state partners to implement projects through the process jointly developed by Environmental Council of States and EPA, that would encourage economic savings and environmental management alternatives without compromising human health and the environment.

The RCRA program reduces the risk of exposures to dangerous hazardous wastes by maintaining a "cradle-to-grave" waste management framework. This framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste, ensuring that improper management does not expose communities to hazards. The main vehicle for hazardous waste program implementation is the issuance of RCRA hazardous waste permits which mandate appropriate controls for each site. Hazardous waste management facilities have made significant progress in having appropriate controls in place to minimize the threat of exposure to hazardous substances. To date, 47 states, Guam and the District of Columbia are authorized to issue permits.

Strong state partnerships and the authorization of states for all portions of the RCRA hazardous waste program, including regulations that address waste management issues contained in permits, is an important goal. State Program Authorization provides the states with primary RCRA implementation and enforcement authority, reduces overlapping and dual implementation by the states and EPA, provides the regulated community with one set of regulations, reduces overall federal enforcement presence in the states and can provide the opportunity for some of the newer less stringent RCRA regulations to be implemented by the states. In FY 2003, the RCRA program will partner with the Regions and states to eliminate the greatest impediments to State Program Authorization, such as identifying and eliminating internal bottlenecks.

The Agency and the states have now permitted most operating land disposal sites (e.g., landfills), as well as most commercial incinerators. In a rulemaking designed to simplify the permitting process for lower-risk treatment and storage facilities, the Agency is developing a

standardized permit. EPA anticipates promulgating the final rule in FY 2002. In FY 2003, the RCRA program plans to give guidance and training on the standardized permit rule and implementation of the rule will begin. In addition, the program is investigating the feasibility of an e-permitting initiative in partnership with the states. Ideally this initiative will expedite and simplify the permitting process and provide better public access to permitting information.

In addition to making changes in the permitting process, the Agency looks to improve all other aspects of waste management throughout the RCRA program. The entry point to this system is the identification of hazardous waste. It is the Agency's responsibility to identify those wastes that, when mismanaged, may pose a substantial risk to human health and the environment, as well as to identify those wastes for which burden should be reduced because of low risk.

In FY 2003, the Agency's waste identification program will continue assessing whether releases of certain industrial wastes are capable of posing a substantial hazard to human health or the environment. During FY 2002, the Agency will assess whether additional hazardous waste identification work remains and implement, if necessary, any identified needs in FY 2003.

In line with efforts to better calibrate risk and regulatory standards, the Agency will continue work on developing targeted exemptions from the hazardous waste mixture and derived-from rules in FY 2003. Two exemptions will be in the final rule stage: one for certain solvents destined for wastewater treatment and discharge under the Clean Water Act, and another for slagged combustion residues from hazardous waste combustors. Work on three other targeted exemptions will likely be underway based on assessment work conducted in FY 2002: a biological treatment residue exemption, a non-slagged-combustion residue exemption and a leachate exemption.

In FY 2003, the Agency will finalize a rule establishing a consistent national approach for managing used industrial wipes, shop towels and rags containing hazardous solvents. As part of this effort, implementation guidance also will be developed to assist the thousands of small business which routinely use these particular materials.

The next step in waste management is transportation from the generator to a treatment, storage or disposal facility, a step the hazardous waste manifest system regulates and tracks. A rule proposed in May, 2001, for major manifest system changes is intended to greatly reduce the paperwork burdens on waste handlers and authorized states, while improving the effectiveness of tracking waste shipments. In FY 2003, the Agency will finalize this rulemaking and adopt appropriate manifest form revisions and standards for preparing, signing, and transmitting manifests electronically.

Treatment and disposal of hazardous waste is the primary area for many changes the Agency is making to the RCRA program. Combustion is one typical method of treatment of hazardous waste. Maximum achievable control technology (MACT) standards for hazardous waste burning incinerators, cement kilns and light weight aggregate kilns were vacated by the U.S. Court of Appeals for the District of Columbia Circuit, therefore the Agency must respond to the court's decision with a revised regulatory and implementation strategy. Technical assistance will be critical during FY 2002 and FY 2003 for ensuring appropriate controls over these major sources of

hazardous air pollutants. The Agency must also develop MACT standards for hazardous waste burning boilers and hydrochloric acid production furnaces in order to meet statutory obligations under the Clean Air Act (CAA).

In FY 2003, EPA will improve and expand activities designed to recover materials and energy from waste. In FY 2002, EPA will propose rule changes to promote the use of petroleum wastes as raw material in gasification processes, which produce clean gas fuels. In FY 2003, the Agency will finalize the proposed rule for petroleum streams and consider changes that also include a range of hazardous waste used in gasification. EPA will consider establishing partnerships with the Department of Energy, industry, and states to facilitate introduction of gasification technology. Potentially, this effort could turn as much as 2 million tons of hazardous waste, and larger amounts of solid and industrial waste, into clean energy.

The Agency will continue to collaborate with other Federal agencies, states, Tribes and industry to promote safe handling of wastes from mining, oil and gas production, electric utilities industries, and cement manufacturing. In FY 2003, the Agency plans to develop proposed Subtitle D regulations for placement of coal combustion wastes in landfills, surface impoundments, and in mines. This effort will cover large utilities as well as industrial burners of coal. EPA will coordinate this work with the Department of Energy and the Office of Surface Mining in the Department of the Interior.

The Agency also works to reduce risks from industrial non-hazardous waste, also known as Industrial D waste. Manufacturing facilities generate and dispose of 7.6 billion tons of industrial non-hazardous waste each year. Partnering with state agencies and industry, EPA issued draft guidelines for management of industrial solid wastes in FY 2000, and will be finalizing the guidelines in FY 2002. The guidelines address a range of issues related to the management of industrial non-hazardous waste, including the siting of waste management units, groundwater contamination, air emissions resulting from solid waste disposal, alternatives to waste disposal, such as recycling and waste prevention, monitoring, closure, and corrective action. The recommendations in these voluntary guidelines incorporate substantial flexibility for a broad range of approaches for dealing with a diverse set of waste streams which pose varying degrees of risk in various site-specific situations. In FY 2003, the Agency will work with states, industry, and community representatives to begin implementation of the voluntary guidelines for industrial non-hazardous waste management.

In FY 2003, the Agency will implement its strategy for revising its landfill criteria. Revisions will provide additional flexibility for states and the regulated community. Additionally, revisions will provide for bioreactor technology as a future energy source. Studies have indicated that bioreactor landfill technology results in a significant increase in landfill gas emissions over a short period of time. These landfill gases consist primarily of methane and carbon dioxide. Landfill gas may represent an opportunity for gas collection and beneficial reuse for projects such as energy recovery. Currently, the use of landfill gas for energy applications is about 10% of its potential. Application of the controlled bioreactor technology to 50% of the waste currently being landfilled could provide over 270 billion cubic feet of methane yearly, sufficient to supply 1% of the U.S. electrical needs based on the U.S. Department of Energy estimates.

The use of biomass as a renewable resource for bio-based products and bio-energy can result in additional farm income, as well as less reliance on foreign energy sources, such as oil. Currently, bio-based products and the bio-energy industry remain small and fragmented. EPA will partner with federal agencies and states to coordinate and promote a unified national bio-energy strategy creating a strong momentum for the expansion of this program.

Waste management, particularly issues surrounding disposal in open dumps, is a significant environmental concern for tribes. A 1997 report to Congress by the Indian Health Service identified 143 high-threat open dumps on tribal lands. In FY 2003, the Agency will continue its leadership role in the interagency program directed toward closing open dumps and/or ensuring that those municipal solid waste landfills in tribal country that wish to remain operating comply with regulations and work toward the most efficient and effective solutions that result in the greatest positive environmental impact. Agencies participating in this program include the Bureau of Indian Affairs, Indian Health Service, and others. The Agency will also assist tribal governments in building both municipal and hazardous waste management capacity.

Better technology also improves the entire RCRA program. In FY 2003, EPA plans to continue its redesign of the national information system (RCRAInfo) for management of hazardous waste. Working with state partners, the Agency is engaged in a multi-year review of the RCRA hazardous waste management information needs in an effort to improve the quality of each site's data, provide improved access to information based on current technology, reduce burden to information based on current technology, and reduce burden to data providers.

Radiation Waste Management

The Radiation program will continue its efforts to address excessive radiation exposure to the public by setting priorities in waste management, clean material, and emergency response. EPA will certify that all radioactive waste shipped by the Department of Energy (DOE) to the Waste Isolation Pilot Plant (WIPP) is permanently disposed of safely and according to EPA standards. The WIPP, which began receiving waste for permanent disposal in 1999, must undergo recertification every 5 years. In FY 2003, the Agency will begin the WIPP's recertification process to ensure the site complies with applicable environmental laws and regulations.

The Agency will also implement the clean materials program by working with the Department of State, Customs Service, other Federal agencies, state agencies, and international organizations to prevent metals and finished products suspected of having radioactive contamination from entering the country. In addition, EPA will also work to locate and secure lost, stolen or abandoned radioactive sources within the united States.

EPA will also evaluate human health and environmental risks from radiation exposure and to further the basic understanding of the biological effects of radiation. EPA will also implement its strategy to address Technologically Enhanced Naturally Occurring Radioactive Material issues in conjunction with other Federal agencies, states, tribes, industry, and environmental groups. Finally, EPA will build the necessary information systems to provide the public access to information about

radiation emissions across the country.

In order to strengthen the abilities of EPA, the States, and other Federal Agencies to prepare and respond to radiological emergencies, the Agency will continue to develop continuity of operation plans and ensure the readiness of response laboratories and monitoring equipment.

Research

To support the Agency's objective of managing active waste management facilities to prevent contaminant releases into the environment, the Agency will conduct research in multimedia science and waste management, as well as perform technical support activities.

Multimedia Science

The Hazardous Waste Identification Rule (HWIR) is being proposed by EPA to provide administrative and economic relief to the regulated community by developing a risk-based approach expected to exclude many low-risk wastes and waste streams from regulatory control under Subtitle C of the Resource Conservation and Recovery Act (RCRA). As the modeling component to HWIR, the Multimedia, Multipathway, and Multi-receptor Exposure and Risk Assessment (3MRA) methodology has been developed and is being improved to provide the scientific underpinnings for this new regulatory approach. This approach has the potential to save millions of dollars annually. Research to be continued or undertaken in FY 2003 and beyond will include:

- improving and making more realistic some of the existing physical, chemical, and biological processes algorithms found in the current system;
- adding the capability for site-specific data input and risk assessments;
- enhancing the technology with more comprehensive uncertainty assessment capabilities; and
- implementing a comprehensive independent testing and validation program.

A major product in FY 2003 will be enhancements to the 3MRA modeling system to support site-specific risk assessments. EPA also will provide consultation on sampling and sample design related to compliance with proposed HWIR "exit levels" (levels below which a waste or waste stream is excluded from regulation under RCRA Subtitle C).

Risk assessment research, another facet of the active waste management research program, will develop provisional toxicity values for a number of contaminants that currently lack values using relevant toxicity and epidemiologic studies from the scientific literature, and will pursue other indirect methods to estimate toxicity.

Waste Management

A number of significant technical problems remain related to waste management. Certain hazardous waste disposal techniques need to be reevaluated and improved to ensure releases are minimized. For example, the solidification/stabilization (S/S) standards for some metals that were

established a decade ago as Best Demonstrated Available Treatment (BDAT) under the Land Disposal Regulations has failed in some cases. Improved techniques to actually predict such releases need to be developed so that EPA can predict the effectiveness of S/S under different disposal environments.

In conjunction with drinking water research in Goal 2, research will continue on hard-to-treat wastes that focus on the characterization and treatment of arsenic-bearing residuals. Leaching studies also will continue on arsenic-bearing wastes, mine process wastes, and municipal solid wastes, including those in bioreactors.

In the area of municipal and solid waste disposal, an increasing number of companies are starting to design landfills as bioreactors to save space and reduce long-term liabilities. These units operate in a significantly different manner than conventional landfills; for example, bioreactors generally have much higher water content and produce more methane gas. Therefore, the effectiveness of such systems and their environmental impacts are still uncertain. In FY 2003, EPA will conduct field sampling and monitoring of several landfill bioreactors, continue the characterization of the microbiology of bioreactor cells, and initiate a bioreactor design manual. Results of these efforts will include an interim field assessment of a landfill bioreactor system.

Another aspect of waste management research involves hazardous waste combustion. Efforts in this area address incinerators and industrial combustion systems burning waste. Emissions from these facilities remain a public concern and a number of uncertainties about them exist, including the cumulative impact of continuous emissions from multiple combustion facilities. In FY 2003, work on continuous emissions monitors will continue with a focus on dioxins and other products of incomplete combustion (PICs). Results will include a paper on revised total organic emissions methodologies for use in permitting.

Technical support activities in risk management and risk assessment associated with RCRA Corrective Action will also continue in the form of support centers. These centers include the Engineering Technical Support Center, the Ground Water Technical Support Center, and the Combustion Technical Assistance Center. These centers provide site-specific technical support, scientific questions (e.g., human health and environmental toxicity), and technology transfer documents.

FY 2003 Change from FY 2002 Enacted

EPM:

- (-$1,100,000) The FY 2003 request is $1,100,0000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

- (+$794,3000) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

STAG:

- No change

OIL:

- No change

S&T

- (-$1,000,000) The FY 2003 request is $1,000,000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the FY 2003 President's request.

Annual Performance Goals and Measures

UST Compliance

In 2003 EPA and its state and tribal partners will ensure that 80% of UST facilities will be in significant operational compliance with leak detection requirements, and 85% of UST facilities will be in significant operational compliance with spill, overfill and corrosion protection regulations

In 2002 EPA and its state and tribal partners will ensure that 77% of UST facilities will be in significant operational compliance with leak detection requirements, and 82% of UST facilities will be in significant operational compliance with spill, overfill and corrosion protection regulations

In 2001 The Agency now tracks the number of UST facilities in significant operational compliance with requirements, as opposed to the number of UST systems equipped to meet the requirements. For this reason, data on these two measures is not available and will not be available in the future

Performance Measures.	FY 2001	FY 2002	FY 2003

	Actual	Enacted	Request	
Percentage of USTs in compliance with the 1998 deadline requirements.	not available			compliance
Percentage of USTs in compliance with the leak detection requirements.	not available			compliance
Percentage of UST facilities in significant operational compliance with leak detection requirements.		77	80	percent
Percentage of UST facilities in significant operational compliance with spill, overfill and corrosion protection regulations.		82	85	percent

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

Emergency Planning

In 2003 300 audits will be completed on RMP plans to determine completeness and accuracy, and 8 additional states (for a cumulative total of 25) will be implementing accident prevention programs

In 2002 90% of facilities will be submitting RMPs, 2 states (for a cumulative total of 17) will be implementing accident prevention programs and 300 audits will be completed on RMP plans to determine completeness and accuracy

In 2001 EPA met its goal, with 85% of facilities submitting RMPs, 5 additional states implementing Accident Prevention Programs, and 438 audits completed to determine RMP completeness and accuracy.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Percentage of facilities which have submitted RMPs.	85	90%		facilities
RMP audits completed.	438	300	300	audits
Number of states implementing accident prevention programs.	5	2	8	states

Baseline. By FY 2000, 75% of facilities were compliant with RMP requirements and 10 states were implementing accident prevention programs

Oil Spill Prevention Compliance

In 2003 600 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations, for a cumulative total of 3,495 facilities since 1997

In 2002 550 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations, for a cumulative total of 2,895 facilities since 1997

In 2001 EPA confirmed an additional 593 facilities in compliance with spill prevention, control, and countermeasures (SPCC) provisions, for a cumulative total of 2,345 facilities in compliance since 1997

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Facilities in SPCC compliance.	593	550	600	facilities

Baseline: 1,752 facilities were in compliance in FY 2000.

Oil Spill Response

In 2003 Respond to or monitor 300 significant oil spills in the inland zone

In 2002 EPA will respond to or monitor 300 significant oil spills in the inland zone.

In 2001 EPA significantly exceeded its goal by responding to 249 oil spills and monitoring 278 oil spills

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Oil spills responded to by EPA.	249			spills
Oil spills monitored by EPA	278			spills
Oil spills responded to or monitored by EPA		300	300	spills

Baseline EPA typically responds to 70 oil spills and monitors 130 oil spill cleanups per year

Ensure WIPP Safety

In 2003 Certify that 8,000 55 gallon drums of radioactive waste (containing approximately 24,000 curies) shipped by DOE to the Waste Isolation Pilot Plant are permanently disposed of safely and according to EPA standards

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of 55-Gallon Drums of Radioactive Waste Disposed of According to EPA Standards		6,000	8 000	Drums

Baseline The Waste Isolation Pilot Plant (WIPP) near Carlsbad, NM was opened in May 1999 to accept radioactive transuranic waste By the end of FY 2002, approximately 13,000 (cumulative) 55 gallon drums will be safely disposed. In FY 2003, EPA expects that DOE will ship an additional 8,000 55 gallon drums of waste to WIPP so that 2 4% of the planned waste volume, based on disposal of 860,000 drums over the next 40 years, is permanently disposed of safely and according to EPA standards. Number of drums shipped to the WIPP facility on an annual basis is dependent on DOE priorities and funding EPA volume estimates are based on projecting the average shipment volumes over 40 years with an initial start up

RCRA Facility Standards and Compliance

In 2003 77 2% of the hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater This represents an additional 39 facilities meeting the goal this year

In 2002 75 8% of the hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, representing an average increase of 39 additional facilities per year

In 2001 An additional 249 hazardous waste management facilities have permits or other approved controls in place, for a cumulative total of 2,051 or 74% of the facility universe The streamlined permitting standards rule was proposed October 12, 2001

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Propose final streamlined permitting standards	1			rulemaking
Percent RCRA hazardous waste management facilities with permits or other approved controls in place.	74%	75 8	77.2	percent
Promulgate final streamlined permitting standards		1		rulemaking
Initiate training program for new permitting standards.			1	training

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

Tribal Prevention Assistance

In 2003 EPA will provide grants to those tribes identified as having facilities subject to the Emergency Planning and Community Right-to-know Act (EPCRA)

In 2003 EPA will evaluate RCRA Subtitle C management needs for an additional 36 Federally recognized tribes

In 2003 EPA will facilitate closing or upgrading existing high-threat open dumps on Indian Lands

In 2002 EPA will evaluate RCRA Subtitle C management needs for an additional 18 Federally recognized tribes.

In 2002 EPA will facilitate closing or upgrading existing high-threat open dumps on Indian lands

In 2002 EPA will identify tribes where chemical facilities subject to Emergency Planning and Community Right to Know Act (EPCRA) requirements exists and have tribal emergency preparedness programs in place to address those risks

In 2001 Data is currently unavailable for the open dumps cleanup project

In 2001 EPA developed a tribal strategy to promote development of tribal chemical emergency preparedness programs

In 2001 EPA evaluated the needs of 177 tribes in FY 2001

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Develop surveys and begin data collection		1		data gatherin
Provide funding assistance.			no target	grants
Development of draft strategy.	1			draft strategy
Tribes evaluated.	177	18	36	evaluations
Open dumps assessed	not available	no target	no target	assessments
Open dumps upgraded to comply with Subtitle D landfill standards.	not available	no target	no target	upgrades
Open dumps with contents transferred and protections against future dumping in place.	not available	no target	no target	sites
Provide support and funding to tribes participating in the multi-Agency Tribal Open Dump Cleanup Project.		no target	no target	funding

Baseline. EPA is currently working to assess the number of tribes with chemical hazards on tribal lands.

Research

Scientifically Defensible Decisions for Active Man

In 2003 Deliver scientifically-enhanced 3MRA to OSW for their HWIR proposal and provide OSW/Regions with site-specific version of this exposure and risk assessment modeling system to implement HWIR and other applications for more cost-effective waste site management and protection of health and environment

In 2001 EPA provided technical information to support RCRA regulatory development for waste identification, containment, and combustion.

Performance Measures'	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Update the HWIR99 modeling methodology for delisting hazardous wastes, in response to public comments on 1999 Federal Register Notice	1			update
Deliver science based enhancements to the 3MRA modeling system to support OSW's proposed HWIR and for conducting site-specific risk assessments.			1	model

Baseline: As a result of their regulatory reform efforts, OSW introduced in November 1999, a new open-architecture, multimedia, multipathway, and multi-receptor exposure and risk assessment (3MRA) methodology designed to support their Hazardous Waste Identification

Rule (HWIR) Independent software testing, peer review on the system architecture and its internal science modules, and public comments on the Federal Register announcement are being addressed through refinements to the proposed modeling system We also are improving some of the existing physical, chemical, and biological processes algorithms in the current system The enhanced version will be used to support OSWs proposed HWIR (Proposal and Final Rule are expected about FY03 and FY05, respectively) which will update existing waste disposal regulations to eliminate possible over-regulation, 3MRA will serve as the scientific basis for establishing safe exit levels for certain wastes The site-specific version will expand the screening level assessment capabilities to provide for site-specific exposure and risk assessments that will be used in HWIR implementation and other RCRA applications

Verification and Validation of Performance Measures

Performance Measure (PM): Percentage of USTs in significant operational compliance with leak detection requirements; Percentage of USTs in significant operational compliance with spill, overfill and corrosion protection regulations.

Performance Database: EPA does not maintain a national database for this information.

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

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

Data Quality Reviews: None.

Data Limitations: This process relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Congressional Performance Measure (PM): Percent of RCRA hazardous waste management facilities with permits or other approved controls in place.

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

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

QA/QC Procedures: States and Regions generate the data and manage data quality related to timeliness and accuracy (i.e., the environmental conditions and determinations are correctly reflected by the data). Within RCRAInfo the application software enforces structural controls that

ensure that high-priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line, provides guidance to facilitate the generation and interpretation of data. Training on use of RCRAInfo is provided on a regular basis, usually annually, depending on the nature of system changes and user needs.

Data Quality Review: GAO's1995 Report on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support meeting the primary objective of helping EPA and states manage the hazardous waste program. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states.

Data Limitations: No data limitations have been identified.

New/Improved Data or Systems: EPA has successfully implemented new tools for managing of environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo. RCRAInfo allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, such as facility status, regulated activities, and compliance history. The system also captures detailed data on the generation of hazardous waste by large quantity generators and on waste management practices from treatment, storage, and disposal facilities. RCRAInfo is web accessible, providing a convenient user interface for Federal, state and local managers, encouraging development of in-house expertise for controlled cost, using commercial off-the-shelf software to develop reports from database tables.

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

Performance Data: The Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) database contains the number of drums shipped by DOE waste generator facilities and placed in the DOE WIPP.

Data Source: Department of Energy

QA/QC Procedures: The performance data used by EPA are collected and maintained by DOE. Under EPA's WIPP regulations, all DOE WIPP-related data must be collected and maintained under a comprehensive quality assurance program meeting consensus standards developed by the American Society of Mechanical Engineers (ASME). EPA conducts regular inspections to ensure that these quality assurance systems are in place and functioning properly; no additional QA/QC of the DOE data is conducted by EPA.

Data Limitations: The DOE WIPP database contains the number of drums shipped by DOE waste generator facilities and placed in the DOE WIPP. Currently, there are five DOE waste generator facilities, Los Alamos National Laboratory, Rocky Flats Environmental Technology Site, Hanford Site, Idaho National Engineering and Environmental Laboratory, Savannah River Site that are approved to generate and ship waste.

Before DOE waste generator facilities can ship waste to the WIPP, EPA must approve the waste characterization controls and quality assurance procedure for waste identification at these sites. EPA conducts frequent independent inspections and audits at these sites to verify continued compliance with radioactive waste disposal standards and to determine if DOE is properly tracking the waste and adhering to specific waste component limits. Since 1998, EPA has completed over 30 inspections prior to shipment of waste to the WIPP facility.

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

New/Improved Data or Systems: None

Coordination with Other Agencies

State UST programs are key to achieving the objectives and long-term strategic goals. EPA relies on state agencies to implement the UST program, including developing core program capabilities and promoting and enforcing compliance with the UST requirements.

Because many agencies at all levels of government have authority to regulate and implement aspects of hazardous materials safety programs, coordination is essential for the success of EPA initiatives. On the chemical accident preparedness and prevention side, inter-agency coordination remains a critical factor in accomplishing the goals of the Risk Management and EPCRA programs. The Agency's role in carrying out these initiatives is to provide leadership and support. EPA works in partnership with states and local governments and other organizations to promote actions to reduce risk. EPA also provides technical assistance and tools to states and LEPCs to better utilize the information on chemical hazards and risks available to them. In addition, through the rulemaking process, EPA works closely with our Federal partners (DOJ, OSHA, DOT) and with states to ensure compatibility with new and existing accident preparedness and prevention initiatives. Close coordination and a cooperative working relationship is also required to effectively meet our responsibilities in the Chemical Safety program, most importantly where they involve the Chemical Safety Board (CSB). EPA has completed a memorandum of understanding with the CSB which further delineates this working relationship.

Under the Oil Spill program, EPA works with other Federal agencies such as the United States Fish & Wildlife Service, National Oceanographic and Atmospheric Administration, United States Coast Guard, Federal Emergency Management Agency, Department of the Interior, Department of Transportation, Department of Energy, and other Federal agencies and states, as well as with local government authorities to develop area contingency plans. The Department of Justice also provides assistance to agencies with judicial referrals when enforcement of violations becomes necessary. EPA and the United States Coast Guard work in coordination with other Federal authorities to implement the National Preparedness for Response program.

The Agency maintains a close partnership with state agencies to implement the RCRA

Permitting and Municipal Solid Waste (MSW) landfill programs. States are to achieve the same level of protection as the Agency, including the annual performance goals of controls at hazardous waste facilities and MSW landfills. Regional offices negotiate with the state agencies regarding the goals and performance they will achieve with the grant funds. For example, Regions may negotiate with the state agencies the number of facilities they will permit in a year resulting in approved controls in place at facilities. The Agency will continue our partnership effort with state agencies by providing technical assistance and guidance on implementing permitting and MSW Landfill programs.

The Agency works with tribes to ensure compliance under RCRA on Indian lands. Regional RCRA tribal teams are partnering with the Indian Health Service (IHS) and the Bureau of Indian Affairs (BIA) to address open dump issues on tribal lands. Regional offices establish interagency workgroups in states where partnership with these Federal agencies have not been well established. Workgroup representatives from other Federal agencies coordinate tasks based on the field of expertise within each agency which allows for efficient completion of the open dump initiative without overlapping efforts.

Research

EPA developed a Memorandum of Understanding (MOU) with several other agencies (Department of Energy, the Department of Defense, Nuclear Regulatory Commission, Department of the Interior - US Geological Survey, and the Department of Agriculture) for multimedia modeling research and development; contacts with the other agencies have been developed largely as a spin-off of the successful 3MRA modeling program in EPA. The multi-agency coordination will avoid inefficient duplication, and allows each agency or department partner to benefit from the best expertise available on any subject area.

With respect to waste management issues, cooperation is taking place with other outside elements. Currently, EPA has the lead in providing regulatory guidance for solid waste disposal issues. The Agency has also worked extensively with bioreactor technology, in cooperation with states and private industry, and will continue to do so in FY 2003. In conjunction with the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the National Council of Governors, EPA state programs have been actively analyzing new operating configurations for landfills. The Interstate Technical Regulatory Cooperation (ITRC) has proved a good forum for coordinating Federal and state activities and for defining continuing research needs. All of these efforts help bridge the gaps in the Agency's own research programs.

Statutory Authorities

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

Research

- Solid Waste Disposal Act (SWDA)

- Resource Conservation and Recovery Act (RCRA)
- Hazardous and Solid Waste Amendments (HSWA)
- The Clean Air Act Amendments (CAA)

Goal 6: Reduction of Global and Cross-Border Environmental Risks VI-1
Reduce Transboundary Threats to Human and Ecosystem Health in North America VI-10
Reduce Greenhouse Gas Emissions VI-21
Reduce Stratospheric Ozone Depletion VI-48
Protect Public Health and Ecosystems from PBTs and other Toxics VI-56
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies VI-66

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 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Reduction of Global and Cross-border Environmental Risks	**$304,287.5**	**$276,588.0**	**$269,727.2**	**($6,860.8)**
Reduce Transboundary Threats to Human and Ecosystem Health in North America.	$120,000.8	$96,869.4	$98,185.9	$1,316.5
Reduce Greenhouse Gas Emissions.	$149,610.2	$145,293.6	$136,953.4	($8,340.2)
Reduce Stratospheric Ozone Depletion.	$18,989.4	$15,843.2	$15,813.3	($29.9)
Protect Public Health and Ecosystems from PBTs and other Toxics.	$4,772.6	$6,060.9	$6,173.6	$112.7
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies.	$10,914.5	$12,520.9	$12,601.0	$80.1
Total Workyears	549.7	517.7	504.7	-13.0

Background and Context

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

International environmental management programs provide important political and economic benefits. A significant portion of EPA's international work fulfills legally binding treaties, conventions and other international statutory mandates. Sharing regulatory and technological expertise helps the United States, other industrialized nations, and developing nations achieve development consistent with the goals of protecting human health and the environment. As

developing nations progress economically, their use of sound environmental practices will prevent the need for costly cleanup and restoration in the future. In addition, the development of effective environmental management and regulatory regimes throughout the world helps ensure that U.S. companies are not competitively disadvantaged by developing nations who otherwise may opt for rapid, inexpensive economic growth at the expense of the environment.

Means and Strategy

To reduce environmental and human health risks along the U.S./Mexico Border and the Great Lakes, EPA employs both voluntary and regulatory measures. Efforts in the U.S./Mexico Border Area utilize a series of workgroups that focus on priority issues ranging from water infrastructure and hazardous waste to outreach efforts focusing on communities and businesses in the border area. The programs were initially conceived in a Federal-to-Federal context. While this may have been appropriate at the start, it is clear that today in both countries, non-Federal governments are the appropriate entities for developing and carrying out much of the work of protecting the border environment. The experience of the last six years has shown U.S. border states as key participants in workgroup activities with similar experience on the Mexico side. In the past year all border states have stressed the need for greater decentralization of environmental authority, and in FY 1999, states and the Federal governments agreed to a set of principles that clarify the roles of the governments and advance state and Tribal participation. Under a new environmental plan developed with SEMARNAP (EPA's Mexican counterpart), targeted for completion by December 2002, the states and Tribes will play a more substantial and meaningful role in:

- determining how Federal border programs are developed and funded;
- focusing on developing regional workgroups that empower border citizens; and
- ensuring that programs devolve from Mexico's Federal government to the Mexican states, with corresponding funding.

The 2001 Great Lakes Strategy, developed by EPA's Great Lakes National Program Office (GLNPO) and Federal, state, and Tribal agencies in consultation with the public, advances U.S. Great Lakes Water Quality Agreement implementation. Its long-range vision (a healthy natural environment where all beaches are open for swimming, all fish are safe to eat, and the Lakes are protected as a safe source of drinking water) is supported by Lakewide Management Plans and Remedial Action Plans for Areas of Concern. Progress is measured through the Integrated Atmospheric Deposition Network and GLNPO's open water, fish, and sediments monitoring. To prevent degradation of the marine environment, the Agency, in conjunction with the Department of State, the National Oceanic and Atmospheric Administration (NOAA), and other Federal agencies, is focusing on the negotiation and implementation of legally-binding multilateral agreements. These agreements are designed to address sources of marine pollution that impact the United States.

EPA will meet its climate change objectives by both working with business and other sectors to deliver multiple benefits - from cleaner air to lower energy bills - while continuing to improving overall scientific understanding of climate change and its potential consequences. The core of EPA's climate change efforts are government/industry partnership programs designed to capitalize

on the tremendous opportunities available to consumers, businesses, and organizations to make sound investments in efficient equipment and practices. These voluntary programs remove barriers in the marketplace, resulting in faster deployment of energy efficient technology into the residential, commercial, transportation, and industrial sectors of the economy. Through the Clean Automotive Technology initiative, EPA will work with industry to develop and commercialize fuel-efficient hydraulic hybrid and advanced engine technologies that will utilize EPA developed technologies.

EPA is also engaged in working with key developing countries and economies- in- transition to provide capacity building and technology transfer in areas of air quality, transportation, clean energy use and energy efficiency, and cleaner production. Working hand-in-hand with international partners, these joint activities support more sustainable practices and lead to greenhouse gas emissions reductions as well as build local technical capacity for developing countries to take on commitments to reduce greenhouse gas emissions under the 1992 Climate Convention. EPA's activities provide information sharing and training and contribute to the fulfillment of U.S. commitments under the Climate Convention to facilitate technology transfer to developing countries.

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

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

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

- Implementing formal bilateral and multilateral environmental agreements with key countries, executing environmental components of key foreign policy initiatives, and, in partnership with the Department of State, engaging in regional and global negotiations aimed at reducing risks via formal and informal agreements.

- Working with other countries to ensure that domestic and international environmental laws, policies, and priorities are recognized and implemented.

- Partnering with other Federal agencies, states, business, and environmental groups to promote the flow of environmentally sustainable technologies and services worldwide.

Research

EPA's Global Change Research Program contributes to the Agency's goal of reducing greenhouse gas emissions by providing the knowledge to allow policy makers to find the most appropriate, science-based solutions to reduce risks to human health and ecosystems posed by climate change (e.g., the impacts climate change could have on the spread of vector-borne and water-borne disease, as well as on air and water quality). The Agency is working to assess the vulnerability of human health and ecosystems to various environmental stressors (e.g., climate change, land-use change, UV radiation) at the regional scale, and to assess adaptation strategies.

Highlights

In FY 2003, EPA will use a variety of approaches to build international cooperation and technical capacity and to prevent harm to the global environment and ecosystems we share with other nations.

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

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

U.S./Mexico Border

To reduce environmental and human health risks along the U.S./Mexico Border, EPA will continue its work with the border states and Mexico to target the quality of air, drinking water and wastewater treatment and hazardous waste management and disposal. Nine working groups will address key issues while working closely with state and local agencies on both sides of the border. EPA will also continue to support the financing and construction of water, wastewater treatment and solid waste facilities.

Following on the agreement of Presidents Bush and Fox to serve urgent environmental priorities in the border, EPA and SEMARNAP (EPA's Mexican counterpart) will "work closely with our state and Tribal partners to develop -by December 31, 2002- a new and results-oriented plan for the U.S.-Mexico border." The environmental plan will build on the foundation of the La Paz Agreement and draw on experiences of previous border programs. As a step toward

development of this plan, the 10 border states have proposed, and EPA concurs with, the following mission statement: "To protect public health and the environment through conservation, pollution prevention, and pollution abatement in the U.S.-Mexico border region, consistent with the principles of sustainable development."

Great Lakes

EPA, through the Great Lakes National Program Office, will coordinate among state, Tribal, and Federal agencies to implement the Great Lakes Strategy and measure progress against quantitative environmental objectives in areas such as clean-up of Areas of Concern, reduction of fish contaminants, beach closures, sediment remediation, wetland restoration, and invasive species. In FY 2003, if long term trends continue, EPA will report a 5% decline in toxics (PCBs) in lake trout and a 7% reduction in air toxic concentrations. EPA and its partners will remediate over 100,000 cubic yards of contaminated sediments. EPA will also explore why Lake Erie dissolved-oxygen levels are inexplicably low despite U.S. and Canadian success in achieving phosphorus targets.

Proposed longer-term objectives in the draft Great Lakes Strategy include:

- By 2005, clean-up and de-list 3 Areas of Concern, with a cumulative total of 10 by 2010 out of 43 that have been identified.
- By 2007, reduce concentrations of PCBs in lake trout and walleye by 25%.
- By 2010, 90% of monitored Great Lakes beaches will be open 95% of the swimming season. (Current data for calendar year 2000 indicates that there are 234 monitored beaches in the Great Lakes, and about 75% of them are open more than 95% of the season.)
- By 2010, vessels entering the Great Lakes will discharge ballast water free of invasive species.
- By 2010, restore or enhance 100,000 acres of wetlands in the Basin.
- Accelerate the pace of sediment remediation, leading to the clean-up of all sites by 2025.

Climate Change

EPA's voluntary climate change programs have made significant progress to date. However, there remain large opportunities to achieve further pollution reductions and energy bill savings from energy efficiency programs and greater use of cost-effective renewable energy. In the U.S., energy consumption causes more than 85 percent of the major air emissions such as NO_x, SO_2, and CO_2. At the same time, American families and businesses spend over $600 billion each year on energy bills - more than we spend on education. Technologies are available today that can cut this energy use significantly. Other technologies are being developed that may provide even more dramatic opportunities - such as transferring the highly efficient hybrid powertrain components, originally developed for passenger car applications, to meet the more demanding size, performance, durability, and towing requirements of Sport Utility Vehicles (SUVs) and urban delivery vehicle applications, resulting in increased fuel economy. In particular, EPA's Clean Automotive Technology (CAT) initiative will provide the following benefits:

- Allow EPA to develop unique engine and hybrid technology for SUVs and urban delivery vehicles, resulting in increased SUV fuel efficiency of 30% (from 2001 baseline of 20.2 mpg) by 2006 and up to 100% by 2010.
- With the successful development and adoption of this cost effective and practicable technology (facilitated by complementary policies), EPA estimates that the eventual market penetration for this technology to be up to 40-50% in 2020.
- This would result in a potential for annual fuel savings of up to 8 billion gallons (4% savings from business-as-usual) or the equivalent of 25 MMTCE reduced in 2020 (from light trucks including SUVs).

EPA will continue to build upon its voluntary government/industry partnership efforts to achieve even greater greenhouse gas reductions by taking advantage of additional opportunities to simultaneously reduce pollution and energy bills. EPA's climate programs break down market barriers and foster energy efficiency programs, products and technologies, cost effective renewable energy, and greater transportation choices. A key example is within the Buildings Sector which represents one of EPA's largest areas of potential, and at the same time is one of its most successful. EPA will continue to build upon the successful ENERGY STAR partnerships (including ENERGY STAR Labeling and the ENERGY STAR Buildings Program) and work toward the goal of offsetting about 24% of the growth in greenhouse gas emissions above 1990 levels expected by 2010 in this sector. EPA's programs will contribute about 43 MMTCE annually in greenhouse gas reductions by 2010 while saving businesses and consumers more than $14 billion. In addition, EPA will continue work in the Industry and Transportation Sectors as well as fostering efforts in carbon sequestration.

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

Stratospheric Ozone

To protect the earth's stratospheric ozone layer in accordance with the United States' commitment to the Montreal Protocol, EPA will continue to regulate ozone-depleting compounds, foster the development and use of alternative chemicals in the U.S. and abroad, inform the public about the dangers of overexposure to UV radiation, and use pollution prevention strategies to require the recycling of ozone-depleting substances (ODSs) and hydroflourocarbons.

Toxics and Pollutants

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

pollutant release and transfer registers and the harmonization of chemical testing, assessment and labeling procedures. The goal of international harmonization of test guidelines is to reduce the burden on chemical companies of repeated testing in satisfying the regulatory requirements of different jurisdictions both within the United States and internationally. Harmonization also expands the universe of toxic chemicals for which needed testing information is available, and fosters efficiency in international information exchange and mutual international acceptance of chemical test data. EPA will continue to cooperate closely with other Federal agencies and with other industrialized nations within the program framework of the Organization for Economic Cooperation and Development (OECD) in harmonizing testing guidelines.

The U.S. is working with other OECD member countries to implement the International Screening Information Data Set (SIDS) program, a voluntary international cooperative testing program begun in 1990. The program focuses on developing base-level test information (including data on basic chemistry, environmental fate, environmental effects and health effects) for international high production volume 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 75 SIDS chemicals in FY 2003.

POPs Implementation

The United States recently signed the Stockholm Convention on persistent organic pollutants (POPs) which addresses substances such as DDT, PCBs and dioxins. These substances travel great distances in the environment and thus threaten humans and the ecosystem in the U.S., despite domestic efforts to reduce releases. The problem is especially acute in Alaska and the Great Lakes, where POPs are taken up in the food chain and impact Native Americans who depend on subsistence foods. This convention will require ratifying countries to reduce and/or eliminate their production, use, and/or release of specified POPs. To ensure that developing countries comply with obligations under this convention, the U.S. is working with the Global Environment Facility (a joint funding program run by the World Bank, the United Nations Environment Program, and the United Nations Development Program) to carry out capacity-building programs in developing countries.

In FY 2003, EPA will target new and existing resources to: (1) provide technical and financial assistance to key countries/regions, with an emphasis on those whose releases most directly affect the U.S. (e.g., Russia, Central America, and the Caribbean); (2) address key priorities/areas of need for each country as well as gaps in technical and financial assistance; (3) maximize use of existing bilateral and regional partnerships, such as the North American Commission on Environmental Cooperation (NACEC) and the Arctic Council, to achieve efficiencies and leverage funding; and (4) support international cooperative efforts, such as monitoring and assessment, to identify trends and establish priorities.

Research

EPA will assess the potential consequences of global change - including climate variability and change, land use changes, and UV radiation - on air quality, water quality, ecosystem health, and

public health. EPA will also assess potential adaptation strategies for building resilience to global change, while responding to both risks and opportunities. The program will continue to focus on providing scientific information to support decision making by policy makers, resource managers, and other stakeholders. In FY 2003, EPA's Global Change Research Program will place particular emphasis on continuing its support for the assessment of the consequences of global change within regions and sectors, the ongoing U.S. National Assessment activities, and other related U.S. Global Change Research Program (USGCRP) assessment activities. The Program will emphasize assessing the potential effects of climate change on weather-related morbidity and will continue to support the maintenance of the UV monitoring network and data collection using the network. Additional areas of focus in FY 2003 will be continuing the assessment of potential consequences of global change for air quality (which will inform air quality managers and other decision makers about how climate change might affect regional concentrations of criteria air pollutants), water quality (which will inform managers of public water systems of how climate change might affect water quality in states and localities), and aquatic ecosystem health.

External Factors

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

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

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

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

The U.S. Global Change Research Program (USGCRP) was established in 1990 by the U.S. Global Change Research Act. The 1990 Act mandates that the USGCRP conduct periodic assessments of the consequences of global change for the U.S. EPA is one of ten member agencies

of the USGCRP. The EPA program relies on partnerships with academic institutions to fulfill its obligations to the USGCRP National Assessment effort.

EPA's efforts to reduce global and regional threats to oceans and the atmosphere require the active cooperation of other countries. Health and environmental benefits resulting from the multi-billion dollar investment by U.S. companies to reduce emissions of stratospheric ozone-depleting compounds could be completely undone by unabated emissions of these chemicals in other countries. Fortunately, the Montreal Protocol on Substances that Deplete the Ozone Layer has secured the participation of most countries, including major producers and consumers of these chemicals. Recovery of the stratospheric ozone layer is contingent upon international adherence to the commitments made under the Montreal Protocol. UV risk-reduction efforts are impacted by the rate of recovery of the ozone layer and socio-behavioral norms and attitudes regarding sun protection.

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Reduction of Global and Cross-border Environmental Risks

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

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Reduce Transboundary Threats to Human and Ecosystem Health in North America.	**$120,000.8**	**$96,869.4**	**$98,185.9**	**$1,316.5**
Environmental Program & Management	$21,136.7	$21,869.4	$23,185.9	$1 316.5
State and Tribal Assistance Grants	$98.864.1	$75,000.0	$75,000.0	$0.0
Total Workyears	82.9	83.5	80.8	-2.7

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$60 1	$0 0	$0 0	$0.0
Facilities Infrastructure and Operations	$0 0	$1,082.2	$1,127.7	$45.5
Great Lakes National Program Office	$15,265 3	$14,929.7	$15,128.2	$198.5
Legal Services	$422 5	$443.1	$476.2	$33.1
Management Services and Stewardship	$196 2	$333.4	$373.7	$40 3
Regional and Global Environmental Policy Development	$913.0	$931.5	$715.5	($216.0)
U.S. - Mexico Border	$4,384.2	$4,149 5	$5,364 6	$1,215.1
Water Infrastructure-Mexico Border	$74,835.0	$75.000 0	$75.000 0	$0.0

FY 2003 Request

EPA's activities under this objective address transboundary environmental threats along the U.S. border areas, in shared North American ecosystems, as well as in the Great Lakes. Activities focus on the U.S.-Mexico Border, the U.S.-Canada Border, the Great Lakes Program, and marine and Arctic environments.

U.S.-Mexico Border

Communities along the 2,000 mile U.S.-Mexico border are experiencing rapid economic and population growth, as well as environmental problems, much of it driven by increased trade between the countries. There are more than 12.6 million border residents, a population that has doubled in the last 15 years, and is expected to double again in the next 20 years. Among the negative consequences of this growth are inadequate environmental infrastructure, increased water scarcity, serious gastrointestinal and respiratory illness, and hazardous and non-hazardous waste disposal problems. Based on the results of the U.S. - Mexico Border XXI Program: Progress Report 1996 - 2000 and public comments, EPA will focus limited resources in areas which can most directly lead to improvements in public health and environmental conditions in this area. The program focuses on 1) reducing the effects of the environment on human health, 2) improving air quality, 3) funding wastewater and drinking water infrastructure investments in under-served communities, 4) managing chemical accidents, 5) supporting pollution prevention programs that will, over the long term, reduce the adverse health and environmental effects of pollutants, 6) reducing and effectively managing hazardous and solid wastes, 7) strengthening binational cooperation between institutions responsible for enforcing their respective country's environmental laws, and 8) strengthening coordination on pesticide activities linking the work on regulatory harmonization with field implementation projects to protect field workers and assure safe food supplies.

EPA's programs will enhance efforts to monitor air quality and establish programs to reduce air pollution. The completion of joint chemical accident contingency plans in border sister-cities will further reduce the risk to human health and ecosystems due to chemical spills. Working with the government of Mexico, EPA will implement a system to track the movement of hazardous wastes, providing a tool for the enforcement of waste disposal regulations and decreasing the risk of exposure due to noncompliance.

A significant number of residents along the U.S.-Mexico border area are without basic services such as potable water and wastewater treatment and the problem has become progressively worse in the last few decades. In January 2001, EPA estimated water and wastewater infrastructure needs along the U.S.-Mexico border at $4.5 billion. For FY 2003, the Agency has established a goal that cumulatively 900,000 people in the border area will be protected from health risks because of the construction of adequate water and wastewater sanitation systems. To respond to serious health threats due to environmental infrastructure deficits, EPA will work with two key partners, the Border Environment Cooperation Commission and the North American Development Bank, which manages the Border Environmental Infrastructure Fund (BEIF), to support the financing and construction of water and wastewater treatment.

The Agency will cooperate with its Mexican counterpart agencies to implement the provisions of the LaPaz Agreement and the Border XXI Framework Document which provide a long-term strategy to improve public health and the environment and protect essential natural resources on the border. Nine binational

working groups will address key issues, working closely with state and local agencies on both sides of the border.

Communities along the 2,000 mile U.S.-Mexico border are experiencing rapid economic and population growth, as well as environmental problems, much of it driven by increased trade between the countries. There are more than 12.6 million border residents, a population that has doubled in the last 15 years, and is expected to double again in the next 20 years. Among the negative consequences of this growth are inadequate environmental infrastructure, increased water scarcity, serious gastrointestinal and respiratory illness, and hazardous and non-hazardous waste disposal problems. Cooperative programs with Mexico to address these problems are carried out under the 1983 La Paz Agreement, in which Regional, media, and functional workgroups implement an array of activities with states, municipalities, and other organizations.

EPA will focus FY 2003 resources in areas which can most directly lead to improvements in public health and environmental conditions in the area and begin development of a new environmental program for the border. During discussions between the Bush Administration and the Government of Mexico a new commitment to work closely with our state and Tribal partners to develop a new and results-oriented plan for the U.S.-Mexico border was proposed and agreed to. The center piece of this new plan is a shift from an centralized decision-making framework to regional framework, working more closely with States, Tribes, and local communities on both sides of the border on environmental issues they have identified and prioritized. Efforts underway will continue as work progresses in developing a successor initiative to Border XXI.

Great Lakes

The Great Lakes National Program Office (GLNPO) will coordinate implementation of the ecosystem approach in the Great Lakes by its Federal, state, Tribal, and local partners, implementing a "community-based" approach. GLNPO and its partners will manage programs in accord with a multi-agency 2001 Great Lakes Strategy.

EPA will assess and report on the state of key Great Lakes ecosystem components, make status and trend information available to Great Lakes environmental managers, and coordinate measurement of a limited number of environmental indicators applicable to the entire Great Lakes Basin. EPA's Great Lakes program will describe trends in: concentrations of toxics in Great Lakes top predator fish; beach closings; concentrations of toxic chemicals in the air, trophic status and phosphorus; and contaminated sediment remediation. Information will be provided to state and Federal environmental managers to support decision making. GLNPO will adjust implementation of its monitoring program for a subset of indicators consistent with GPRA, the new Great Lakes Strategy, and the biennial State of the Lakes Ecosystem Conference (SOLEC - a biennial conference bringing together representatives of the public and private sectors to facilitate decision making based upon sound environmental information).

Adjustments to the monitoring program will enable the Agency and its partners to determine how to further reduce Great Lakes pollutants in the most cost-effective way and will provide trend and baseline data to support and target remedial efforts and measure environmental progress under Remedial Action Plans and Lakewide Management Plans. The Research Vessel (R/V) Lake Guardian (open lake monitoring), the R/V Mudpuppy (nearshore sediments monitoring), and the joint GLNPO/Canadian integrated atmospheric

deposition network (including air monitoring stations on each Great Lake) will be central to summarizing the ecological State of the Lakes. GLNPO will also explore why dissolved-oxygen levels in Lake Erie are inexplicably low, resulting in an increasing "dead zone," despite U.S. and Canadian success in achieving total phosphorus targets. EPA will also expand access to Great Lakes environmental information via the Internet.

EPA will work with Environment Canada and lead domestic partners in implementing the Great Lakes Binational Toxics Strategy, signed in 1997. The Strategy, a groundbreaking international toxics reduction effort, targets a common set of persistent, toxic substances for reduction and virtual elimination from the Great Lakes. It focuses on pollution prevention efforts, using voluntary and regulatory tools to achieve reductions, and contains reduction challenges for a targeted set of substances, e.g., mercury, PCBs, dioxins/furans, and certain canceled pesticides. Actions and activities are outlined in the Strategy which states, industry, Tribes, non-government organizations and other stakeholders may undertake to achieve these reductions. Through grants to stakeholders (such as the Great Lakes States, Tribes, and environmental groups) for mercury or PCB reduction projects, and other reduction actions, EPA will help achieve reduction targets, consistent with the identification of options for each of the 12 Binational Toxics Strategy substances. EPA proposes to work with industrial and municipal sectors to achieve additional reductions. Implementation of the Strategy outside of the Great Lakes Basin will be augmented through cross-Agency support and activities relating to EPA's Persistent Bioaccumulative Toxics (PBT) Initiative. Toxics highlighted in the Strategy were chosen as the initial set of toxics targeted under the PBT Initiative.

EPA, with its Great Lakes partners, will continue to address the contaminated sediments polluting the rivers and harbors of the 31 U.S. and/or binational Areas of Concern (AOCs). GLNPO will provide technical expertise, garnered during the congressionally mandated Assessment and Remediation of Contaminated Sediments program, in addition to financial support and the use of its sediment sampling vessel, the R/V Mudpuppy, to support sediment assessments at AOCs. GLNPO also provides technical support to our Great Lakes partners for evaluating available data and making sediment management decisions at specific sites. If a community chooses to remediate the sediments, GLNPO can provide technical and limited financial support for conducting sediment site clean-up. In FY 2003, GLNPO will assist states and communities with assessments and remedial design at sites in 4 AOCs, one of which has not previously received this assistance. A total of 100,000 cubic yards of contaminated sediments is expected to be remediated through various actions involving a number of different stakeholders.

The Agency will support the efforts of states, Tribes, and local communities to protect and restore important habitats identified in the Great Lakes biodiversity report of The Nature Conservancy (TNC) and in SOLEC habitat papers. The program emphasizes habitats important for biodiversity and ecological integrity, such as those necessary for endangered and threatened species. Additional projects for ecological enhancement will be started in nearshore waters, coastal wetlands, river corridors, and terrestrial lands. The projects will implement measures to protect ecological communities and biodiversity or take steps to restore ecological functions and processes. Pilots will be underway for the development of indicators for scientifically sound assessments of the ecological integrity of coastal wetlands.

EPA is working with states and local groups from the Areas of Concern to expedite de-listing of those Areas of Concern. EPA, states, and local communities will strategically target reductions of critical pollutants and restoration of impaired beneficial uses through Remedial Action Plans for Areas of Concern and through Lakewide Management Plans for Lakes Ontario, Michigan, Superior, and Erie. The Agency

will continue to report to Congress and the International Joint Commission regarding progress under the Great Lakes Water Quality Agreement.

Marine and Arctic Environments

In FY 2003, EPA will undertake efforts to prevent significant degradation of the marine and Arctic environments. Our FY 2003 performance goals target incremental steps necessary to achieve our longer-term objectives of preventing further degradation of the marine environment of the Wider Caribbean and Arctic Ocean, as well as the marine environment more generally, where our negotiating efforts through the International Maritime Organization are aimed at mitigating marine pollution at a global scale. Our Regional and global efforts are specifically designed to enhance the effectiveness of existing domestic environmental controls and reduce pollution of U.S. waters resulting from international shipping and other transboundary vectors.

The focus of the program is the protection of those natural resources in the marine and polar environments that are important to the United States and other countries as well as the public health of Arctic Rim populations. More specifically, the programs will prevent or reduce environmental damage associated with tributlytin, vessel discharges, invasive species, and ocean dumping. Specific projects aimed at protection of the Arctic ecosystem are focused on preventing and reducing environmental contamination from spent nuclear fuel, PCBs, and dioxins in Northwest Russia.

The Russia PCB project will assist the Russian Federation in phasing out its manufacture and use of PCBs, to reduce the release of PCBs and their subsequent transport to the Arctic, and to encourage the Russian Federation to begin using PCB substitutes. EPA's involvement to address toxic pollutants in the Arctic region are now addressed under Objective 4, Global Toxics. The project is a multilateral cooperative pilot and is currently being conducted in conjunction with all the Arctic Rim countries under the auspices of the Arctic Council. In May 1999, agreements were signed with the Russian Federation to begin the multilateral cooperative pilot project, with the completion of a Russian Federation PCB inventory planned for May 2000. Based on the results of the inventory, Russian facilities that impact the Arctic will be prioritized for conversion or retrofitted for the manufacture or use of PCB substitutes. In 2001, the Arctic Council instituted a corresponding multilateral project to address dioxins and furans impacting the Arctic environment; EPA's involvement is addressed under Objective 4, Global Toxics.

In addition, ongoing efforts to address land-based sources of marine pollution in the wider Caribbean should result in improvements in Regional water quality and marine habitats that include economic benefits to significant commercial interests in the Region. Finally, our involvement in global negotiations is critical to maintain needed flexibility in domestic rule making and other environmental policy mechanisms.

FY 2003 Change from FY 2002

EPM

- (-$537,000) This decrease reflects a disinvestment of a FY 2002 Congressional earmark.

- (+$1,000,000) This increase provides additional resources for mitigating threats to public health and the environment and establishing a new environmental plan for the U.S. -Mexico Program

- ($1,398,700) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Annual Performance Goals and Measures

U.S. - Mexico Border Water/Wastwater Infrastructure

In 2003 Increase the number of residents in the Mexico border area who are protected from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructure by providing improved water and wastewater service

In 2002 Increase the number of residents in the Mexico border area who are protected from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructure by providing improved water and wastewater service.

In 2001 Provided protection to over 576,405 residents in the Mexico border area from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructure by providing improved water and wastewater service.

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of additional people in Mexico border area protected from health risks, because of adequate water & wastewater sanitation systems funded through Border Environmental Infrastructure Fund.	576,405	790,000	900,000	People

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

Great Lakes: Binational Toxics Strategy

In 2003 Reduce Great Lakes toxic pollutants.

In 2002 Reduce Great Lakes toxic pollutants.

In 2001 Reduced Great Lakes toxic pollutants by remediating over 400,000 cubic yards of contaminated sediment..

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Cubic yards of contaminated sediment remediated in the Great Lakes	401,500	100,000	100,000	Cubic yards

Baseline U S baselines for toxic pollutants are, in most cases, based on the most recent and appropriate inventory as of the Great Lakes Strategy's 1997 signing In the case of mercury, for example, the most recent inventory is based on estimated emissions during the early 1990s In September 1999, GLNPO quantified for the first time annual contaminated sediment remediation GLNPO will continue to quantify contaminated sediment remediation annually

Great Lakes: Ecosystem Assessment

In 2003 Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status

In 2002 Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
Long-term concentration trends of toxics (PCBs) in Great Lakes top predator fish	Uncertain	Declining		5%	Annual decrease
Long-term concentration trends of toxic chemicals in the air	Declining	Declining		.7%	Annual decrease
Total phosphorus concentrations (long-term) in the Lake Erie Central Basin	Improving	Improving		10	Ug/l
Long-term dissolved oxygen depletion trend in Lake Erie		Limited		3 11	Mg/l

Baseline Identified targets are currently based on historic trends The trend (starting with 1972 data) for PCBs in Great Lakes top predator fish toxics is expected to be less than 2 parts per million (the FDA action level), but far above the Great Lakes Initiative target or levels at which fish advisories can be removed The trend (starting with 1992 data) for PCB concentrations in the air is expected to range from 50 to 250 picograms per cubic meter The trend (starting with 1983 data) for phosphorus concentrations is expected to range from 4 to 10 parts per billion, levels established in the Great Lakes Water Quality Agreement The 1970 baseline of oxygen depletion of the Lake Erie central basin is 3 8 mg/liter/month EPA is working with its partners to refine targets within the next 3 years

Mexico Border Outreach

In 2003 Develop air quality assessments and improvement programs to attain air quality standards in border communities

In 2003 Expand hazardous waste management and pollution prevention practices in the maquiladoras

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
U S cities along the Mexico Border region carrying out air emissions inventories				1	cities
Number of maquiladoras that have implemented pollution prevention controls after a site assessment visit, workshop or training session.				314	maquiladoras

Baseline Many border area residents are exposed to health-threatening levels of air pollutants including ozone, particulate matter, carbon monoxide and sulfur dioxide The need to evaluate levels of targeted air pollutants is particularly urgent in heavily populated urban areas where air quality problems are compounded by emissions from increasing numbers of vehicles - many of which are older and poorly maintained, extensive industrial activity, and numerous air sources (e g , unpaved roads, waste disposal fires) To date seven out of the 14 sister-city pairs have air quality networks established and operating

Verification and Validation of Performance Measures

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

Performance Database: No formal database

Data Source: 1) Population figures from 1990 U.S. Census; 2) Data for both U.S. and Mexican populations served by "certified" water/wastewater treatment improvements from the Border Environment Cooperation Commission (BECC); 3) Data on projects funded from the North American Development Bank (NADBank) 4) Status Report on the Water-Wastewater Infrastructure Program for the U.S.-Mexico Borderlands, January, 2001.

QA/QC Procedures: Headquarters is responsible for coordinating submission of and evaluating quarterly reports from EPA Regional Offices on these drinking water and wastewater sanitation projects.

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

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Concentration trends of toxics (PCBs) in Great Lakes top predator fish.
http://www.epa.gov/glnpo/glindicators/fishcontaminants.html

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

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

QA/QC Procedures: GLNPO has a Quality Management system in place which conforms to the EPA quality management order and is audited every 3 years in accordance with Federal policy for Quality Management.
Data Quality Review: GLNPO's quality management system has been given "outstanding" ratings in previous peer and management reviews. GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: There is greater uncertainty regarding the representativeness of data pertaining to near shore areas because of the greater variability of the near shore environment. GLNPO will be able to quantify uncertainty for data in each reported area. In 2002, GLNPO is seeking documentation of how samples are collected and what they represent in order to quantify uncertainty for data in each reported area. Limitations of the field sampling and design information will be addressed through the field audits mentioned above. The field sampling aspects of the program are voluntary partnerships with the states, thus limiting Federal oversight.

New/Improved Data or Systems: The GLENDA database is a significant new system with enhanced capabilities. Existing and future fish data will be added to GLENDA.

Performance Measure: Concentration trends of toxic chemicals in the air.
http://www.epa.gov/glnpo/glindicators/atmospheric.html

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

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

QA/QC Procedures: GLNPO has a Quality Management system in place which conforms to the EPA quality management order and is audited every 3 years in accordance with Federal policy for Quality Management.

Data Quality Review: GLNPO's quality management system has been given "outstanding" ratings in previous peer and management reviews. This program has a joint Canadian US quality system and workgroup that meets twice a year. GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: The sampling design is dominated by rural sites that under emphasize urban contributions to deposition; thus although the data is very useful for trends information, there is less assurance of the representativeness of deposition to the whole lake. There are gaps in open lake water column organics data, thus limiting our ability to calculate atmospheric loadings.

New/Improved Data or Systems: GLNPO expects to post joint data that has passed quality review to < http://binational.net/ > , a newly created joint international web site.

Coordination with Other Agencies

Mexican Border

Over the last several years, EPA has continued to work with the U.S. and Mexican sections of the International Boundary and Water Commission to further our efforts to improve water and wastewater services to communities within 100 km of the U.S.- Mexico Border. Recently, EPA has been involved in efforts to plan, design and construct more than 10 water and wastewater facilities in the Border Region.

The governments of Mexico and the United States agreed, in November 1993, to assist communities on both sides of the border in coordinating and carrying out environmental infrastructure projects. The agreement between Mexico and the United States furthers the goals of the North American Free Trade Agreement and the North American Agreement on Environmental Cooperation.

To this purpose, the governments established two international institutions:

The Border Environment Cooperation Commission (BECC), with headquarters in Ciudad Juarez, Chihuahua, Mexico, assists local communities and other sponsors in developing and implementing environmental infrastructure projects. EPA has provided $30.5 million through FY 2001 to the BECC project development fund. The BECC also certifies projects as eligible for North American Development Bank financing.

The North American Development Bank (NADBank), with headquarters in San Antonio, Texas, is capitalized in equal shares by the United States and Mexico. NADBank provides new financing to supplement existing sources of funds and foster the expanded participation of private capital. Through FY 2001 EPA has provided $339 million to the NADBank through the Border Environmental Infrastructure Fund, (BEIF) NADBank issues border grants for individual projects from the BEIF on the agency's behalf.

The United States Government has committed to funding $700 million towards the Mexico Border project. Since fiscal year 1994, $607.6 million has been appropriated, including significant funding for projects managed by the International Boundary and Water Commission and for border Tribal infrastructure projects.

Great Lakes

Pursuant to the mandate in Section 118 of the Clean Water Act to "coordinate action of the Agency with the actions of other Federal agencies and state and local authorities...," GLNPO is engaged in extensive coordination efforts with state, Tribal, and other Federal agencies, as well as with our counterparts in Canada. EPA has joined with states, Tribes, and Federal agencies that have stewardship responsibilities for the Lakes in developing a new Great Lakes Strategy. In addition to the eight Great Lakes States and interested Tribes, partners to the plan include the Army Corps of Engineers (Corps), the Coast Guard, the Fish and Wildlife Service (USFWS), the U.S. Office of Geological Survey, the National Oceanic and Atmospheric Administration (NOAA), and the Natural Resources Conservation Service (NRCS) The Strategy joins environmental protection agencies with natural resource agencies in pursuit of common goals. These organizations meet at GLNPO's annual Great Lakes Planning Meeting to plan and prioritize near-term activities. GLNPO monitoring involves extensive coordination among these partners, both in terms of implementing the monitoring program, and in utilizing results from the monitoring to manage environmental programs. GLNPO's sediments program works closely with the states and the Corps regarding dredging issues. Implementation of the Binational Toxics Strategy involves extensive coordination with Great Lakes States. GLNPO works closely with states, Tribes, FWS, and NRCS in addressing habitat issues in the Great Lakes. EPA also coordinates with these partners regarding development and implementation of Lakewide Management Plans for each of the Great Lakes and for Remedial Action Plans for the 31 U.S./binational Areas of Concern.

Marine and Arctic Environments

EPA has a number of joint projects underway addressing radioactive and non-radioactive contamination threats to the Arctic environment and ecosystems, including Alaska and indigenous populations of the Arctic Rim. Domestic partners include the Department of Defense, Department of State, Agency for International Development. International partners are the Government of Norway (Ministry of Foreign Affairs) and the Government of Russia (Ministries of Atomic Energy and Transportation). Three projects address radioactive contamination from Northwest Russia. One, focuses on providing processing capacity for low-level liquid radioactive waste in Murmansk, Russia., two other projects address the safe storage of spent nuclear fuel from decommissioned Russian nuclear submarines. Non-radioactive contamination concerns are being addressed through projects under the eight nation Arctic Council (Finland, Denmark/ Greenland, Norway, Sweden, Canada, Iceland, Russia) and the Arctic Monitoring and Assessment Program (AMAP) under the Council.

The major goals of the Russia PCB project are to assist the Russian Federation in phasing out its manufacture and use of PCBs, to reduce the release of PCBs and their subsequent transport to the Arctic, and to encourage the Russian Federation to begin using PCB substitutes. The ultimate objective is to provide a technical foundation for Russian acceptance of the Protocol on POPs under the Long-Range Transport of Air Pollutants (LRTAP) Convention, as well as the Stockholm Convention on POPs. The Dioxins and Furans Project and the Obsolete Pesticides Projects are addressing the other problems that Russia has identified as obstacles to its acceptance of these international agreements and/or implementing instruments. Other aspects of the PCB work involve coordination or cooperation with HHS (Indian Health Service and Center for Disease Control), agencies of the State of Alaska and a number of Alaskan Native American organizations.

EPA works with the Department of State, NOAA, Coast Guard, Navy, and other Federal agencies in developing the technical basis and policy decisions necessary for negotiating global treaties concerning marine antifouling systems and invasive species as well as a Regional agreement for the Wider Caribbean Basin that will establish standards for domestic wastewater discharges and other land-based sources of marine pollution. Given the geographic scope of these agreements, the efforts involve multilateral negotiations with numerous governments.

Statutory Authorities

Clean Water Act
Clean Air Act
Toxic Substances Control Act
Resource Conservation and Recovery Act
Pollution Prevention Act
Federal Insecticide, Fungicide, and Rodenticide Act
Organotin Antifouling Paint Control Act
Annual Appropriation Acts

US-Canada Agreements
1997 Canada-U.S. Great Lakes Binational Toxics Strategy
1996 Habitat Agenda
1990 Great Lakes Critical Programs Act
1987 Great Lakes Water Quality Agreement
1987 Montreal Protocol on Ozone Depleting Substances
1978 Great Lakes Water Quality Agreement (GLWQA)
1909 The Boundary Waters Treaty
North American Free Trade Agreement

US-Mexico Agreements
North American Free Trade Agreement
LaPaz Agreement

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Reduction of Global and Cross-border Environmental Risks

Objective: Reduce Greenhouse Gas Emissions.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Reduce Greenhouse Gas Emissions.	**$149,610.2**	**$145,293.6**	**$136,953.4**	**($8,340.2)**
Environmental Program & Management	$101,170.3	$96.767 2	$98,104 8	$1,337.6
Science & Technology	$48.439 9	$48,526.4	$38.848 6	($9,677.8)
Total Workyears	347.1	317.3	303.9	-13.4

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$234.6	$0 0	$0 0	$0 0
Climate Change Research	$22,550.4	$21,350 5	$21,729.3	$378.8
Climate Protection Program Buildings	$52,535 0	$48,571.3	$49,820.5	$1,249.2
Climate Protection Program· Carbon Removal	$997.8	$1,549.7	$1,576.3	$26.6
Climate Protection Program: Industry	$31,929.6	$25,368 6	$25.673 1	$304.5
Climate Protection Program, International Capacity Building	$5,501 7	$6,982.8	$7,086 5	$103.7
Climate Protection Program· State and Local Climate Change Program	$2,494 5	$2.245.6	$2,275.2	$29 6
Climate Protection Program: Transportation	$29,435.1	$30,830.7	$21,567.2	($9,263.5)
Congressionally Mandated Projects	$1,371.9	$750.0	$0.0	($750.0)
Facilities Infrastructure and Operations	$4,612.6	$4,461.0	$4,019 1	($441.9)
Legal Services	$269.9	$328.2	$354.5	$26 3
Management Services and Stewardship	$2,525.1	$2,855.2	$2,851.7	($3.5)
Regulatory Development	$65 8	$0.0	$0 0	$0 0
Technical Cooperation with Industrial and Developing Countries	$762.0	$0.0	$0 0	$0.0

FY 2003 Request

EPA is meeting the U.S. climate change objectives by working in partnership with businesses and other sectors through programs that deliver multiple benefits – from cleaner air to lower energy bills – while improving overall scientific understanding of climate change and its potential consequences. In FY 2003, EPA expects to continue the significant accomplishments of its Climate Protection Programs (CPPs). The opportunity to save on our nation's $600 billion annual energy bill over the next decade, while reducing air pollution, is tremendous. The opportunity to reduce greenhouse gas emissions is as great.

The core of EPA's climate change efforts are voluntary government/industry partnership programs designed to capitalize on the opportunities consumers, businesses, and organizations have to make sound investments in efficient equipment, policies and practices, and transportation choices. We currently expect that ten years from now more than half the nation's anthropogenic greenhouse gas emissions will come from equipment purchased between now and then. Thousands of equipment purchases are made every day, and often people buy the equipment that is the least efficient, thereby committing themselves to higher energy bills for 10 to 20 years at a time, depending upon the life of the equipment. At the same time, people often overlook the investment opportunities that the more efficient equipment represents, investment opportunities with the potential of more than double the return on investment of other common options (e.g., money markets, U.S. Treasury bonds).

EPA manages a number of efforts, such as the ENERGY STAR programs and the EPA Clean Automotive Technology (CAT) initiative, to remove barriers in the marketplace and to deploy technology faster in the residential, commercial, transportation, and industrial sectors of the economy. EPA programs do not provide financial subsidies. Instead, they work by overcoming widely acknowledged barriers to energy efficiency – lack of clear, reliable information on technology opportunities; lack of awareness of energy efficient products and services; lack of financing options to turn life cycle energy savings into initial cost savings for consumers; low incentives to manufacturers for efficiency research and development (R&D); and lack of awareness about more energy efficient transportation choices.

The Agency will continue activities that provide co-benefits to other countries and to the global commons. Global reductions in greenhouse gas emissions can be achieved by recognizing and providing support for in-country environmental issues, such as local air quality, energy access and efficiency, cleaner production, transportation alternatives, and solid waste management (for methane reduction).

Some of EPA's newest voluntary programs are particularly timely. These partnership programs will promote cleaner, more efficient energy supply through increased renewable energy and combined heat and power (CHP) applications. These "distributed energy" technologies continue to break the link between our nation's increased energy demand and air pollution. CHP and renewable power also help meet the growing need for decentralized, highly reliable power as our nation's electric grid ages. In FY 2002, the Agency began forming partnerships and initiated a number of transportation efforts focusing both on the industry and state and local sectors, including a

program to implement voluntary ground freight management practices as well as technologies that can substantially improve load scheduling and load matching logistics, reduce truck engine idling, and improve truck fuel efficiency.

Research

EPA's Global Change Research Program is an assessment-oriented program that evaluates the potential consequences of global change for human health, ecosystems, and social well-being in the United States. The Program's assessment process brings together groups of people with common interests and enables them to work together to address environmental concerns. Through workshops and other formal and informal interactions, those who may be affected by environmental change (the stakeholders), those who can provide scientific information about that change (researchers and assessors), and those who can respond to that change (resource managers and decision makers) communicate with each other. This interaction ensures that researchers and decision makers understand the issues of greatest concern to the stakeholders, and that stakeholders understand the scientific basis for research planning decisions. Through this process, assessors integrate insights from diverse research disciplines to address real-world questions. For example, stakeholders have expressed concern about an increase in the spread of certain diseases as a result of climate change. In response, assessors have integrated research on climate change, precipitation change, vegetation, rodent population, and the spread of diseases to determine if a warmer climate may lead to a greater risk of vector-borne disease. This methodology is now being used on an ongoing basis by public health officials in the Four Corners region of the Southwest.

Program Accomplishments

EPA has had substantial success across its CPPs and global change research efforts. Through FY 2001, EPA's CPPs (see Table 1) substantially reduced emissions of carbon dioxide and other greenhouse gases such as methane and perfluorocarbons (PFCs). Since the mid-1990s, these programs have reduced U.S. greenhouse gas emissions by more than 235 million metric tons carbon equivalent (MMTCE) below business-as-usual, equivalent to the emissions of 160 million cars for one year. At the same time, families and businesses saved an estimated $24 billion on their energy bills and keeping roughly 550,000 tons of smog-forming nitrogen oxide (NO_x) pollution from entering the air. In FY 2001, EPA implemented new partnership programs aimed at reducing energy demand in the transportation sector.

Many of EPA's climate protection programs have locked in substantial energy and environmental benefits over the next decade. Since many of the investments promoted through EPA's climate programs involve energy efficient equipment with lifetimes of decades or more, the investments that have been spurred through 2001 will continue to deliver environmental and economic benefits through 2010 and beyond. EPA currently estimates that based on investments in equipment already made due to EPA's programs through 2001, *organizations and consumers across the country will net savings of more than $60 billion through 2010, and greenhouse gas emissions will be reduced by more than 450 MMTCE through 2010* (cumulative reductions based upon estimated 2001 achievements). These programs continue to be highly cost-effective approaches for

delivering environmental benefits across the country. For every dollar spent by EPA on its technology deployment programs, these programs have reduced greenhouse gas emissions by more than 1.0 metric ton of carbon equivalent (3.67 tons of CO_2) and delivered more than $75 in energy bill savings. This is based upon a cumulative reduction since 1995.

In addition to these benefits, the transportation research and development component of EPA's CPPs has produced important technological advancements that will generate substantial energy and carbon benefits in future years, while improving America's competitiveness.

In FY 2001 alone, the CPPs*:

- reduced greenhouse gas emissions by more than 65 MMTCE;
- reduced energy consumption by an estimated 80 billion kilowatt hours;
- successfully demonstrated 80 miles per gallon (gasoline equivalent) on a mid-size research chassis with a state-of-the-art diesel engine and an EPA-invented, patented, and developed hybrid drivetrain; and
- worked with 10 strategically selected countries in Asia, Africa, Latin America, and Eastern Europe to develop capacity to analyze the benefits of and/or implement sustainable, market-based activities/programs designed to reduce greenhouse gas emissions in a cost-effective manner.

* EPA is on track for each of these accomplishments. Final results will be available in calendar year 2002.

These are the four primary performance goals for EPA's CPPs under the Government Performance and Results Act (GPRA). There are also performance measures for key subparts of EPA's CPPs. Table 2 shows that EPA will meet or exceed many of these performance measures. Performance measures have not been met in two areas: transportation and industrial CO_2 programs. Both of these programs have undergone program restructuring and are expected to reduce greater greenhouse gas emissions in FY 2003 and beyond.

Table 1: EPA's Climate Protection Programs

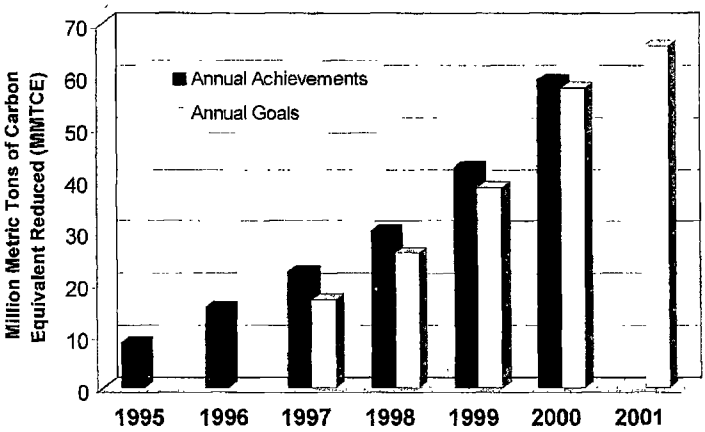
Sector	Program	Activity/Initiative
Buildings	*ENERGY STAR*	*Buildings*
		Labeled Products
		Homes
Industry	*Carbon Reduction Programs (CO_2)*	*ENERGY STAR for industry (formerly Climate Wise)*
		Combined Heat and Power Partnership
		Green Power Partnership
		Industry Partnerships
		Waste Wise
	Methane Programs (CH_4)	*Natural Gas STAR Program*
		Landfill Methane Outreach Program
		Coalbed Methane Outreach Program
		Agricultural Programs (Ruminant Livestock Outreach and AgSTAR)
		Landfill Rule
	Programs to Reduce High Global Warming Potential Gases (HFCs, PFCs, SF_6)	*Voluntary Aluminum Industrial Program*
		PFC Emissions Reduction Partnership for the Semiconductor Industry
		SF_6 Emissions Reduction Partnership for the Electric Power System
		SF_6 Emissions Reduction Partnership for the Magnesium Industry
		Partnership with HCFC-22 manufacturers to reduce HFC-23 emissions
		Significant New Alternatives Program (SNAP)
Transportation	*Transportation Efficiency Programs*	*Commuter Choice Partnership Programs*
		SmartGrowth & Brownfields Policies Programs
		Transit
		Green Vehicle Labeling Program
		Clean Air Transportation Communities Program
		Ground Freight Transportation Initiative
		Variable Priced Vehicle Insurance Initiative
	Clean Automotive Technology (CAT)	*Support Cooperative Research and Development Agreements (CRADAs) for Advanced Engine and Powertrains for Hydraulic Hybrid SUVs and Urban Delivery Vehicles*
Carbon Removal		
State and Local Climate Change Outreach Program		
International Capacity Building		
Global Change Research		

Through FY 2001, EPA's CPPs have also:

- offset growth in greenhouse gas emissions above 1990 levels by about 20%;
- conserved enough energy to light 80 million homes for the year;
- prevented NOx emissions equivalent to the annual pollution from 100 power plants; and
- avoided greenhouse gas emissions equivalent to eliminating the pollution from about 45 million cars for the year.

EPA's climate change programs have met their greenhouse gas reduction goals through FY 2000, as shown in Figure 1, and continue to meet the challenge of substantially higher emissions reduction goals. Many of these programs have actually exceeded their specific goals for reducing greenhouse gas emissions and energy consumption, as shown in Table 2.

Figure 1. Overall Goals and Accomplishments for the Climate Protection Programs



The FY 2001 final results will be available in Spring 2002.

The programs have a number of accomplishments through the end of FY 2001 that are highlighted in Tables 3, 4, 5, and 6 for the buildings, industry, transportation and other sectors, respectively.

Table 2. Goals and Accomplishments for Performance Measures: 1997 through 2003[1]

Program Area/ Key Gases		1997 Accomplished		1998 Accomplished		1999 Accomplished		2000 Accomplished		2001[2] Goal/Accomplished		2002[3] Goal		2003[3] Goal	
		kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced	kWh Saved (billion)	MMTCE reduced
Buildings		21	4.4	35	7.2	61	12.5	74	15 2	80	15.0[5]/16.3	na	17 2[4]	na	19.5[4]
Industry	CO_2	na	3.0	na	4.8	na	5.3	na	5.5	na	9 1[5]/5.8	na	6 3[4,6]	na	6.5[4,6]
	CH_4	na	4.8	na	5.9	na	8.3	na	13.8	na	15.1[5]/15.2	na	16.3[4]	na	17 5[4]
	PFCs, SF_6, HFCs	na	8.5	na	10.4	na	16[5]	na	21.4[5]	na	18 2[4,5]/24.1	na	21 9[4,5]	na	25 6[4,5]
Transportation		na	0.2	na	0.3	na	1.1	na	1.7	na	6 2[5]/1.9	na	2.1[4,6]	na	2 4[4,6]
State and Local		na	1.2	na	1.3	na	1.4	na	1.7	na	1 9[4]/1.9	na	2 0[4]	na	2.0[4]
Total		21	22.1	35	29.9	61	43.6	74	59.3	75[5]/80	65.5[5]/65.2	85[4]	65 8[4]	95[4]	73.5[4]

[1]Metrics are not applicable to CAT, International Capacity Building or Global Change Research. The accomplishments of many of EPA's voluntary programs are documented in *The Power of Partnerships. Energy Star and Other Voluntary Programs*, Climate Protection Partnerships Division 2000 Annual Report, EPA 430-R-01-009, July, 2001. Some program accomplishments from previous years may be different from those reported in last year's budget justification as new information from program partners is incorporated and program evaluation methodologies are refined.

[2]These results are estimates. Final results will be available in Spring 2002.

[3]2002 and 2003 goals are presented here as developed in 1997 for the Second National Communication to the U.N. Framework Convention on Climate Change (FCCC). They are currently under review as part of the process for preparing the Third National Communication to the Secretariat of the FCCC, reporting on national progress.

[4]GPRA performance measure

[5]These goals and accomplishments do not include EPA's efforts on self-chilling cans, which resulted in the avoidance of potentially significant emissions of HCFCs into the atmosphere.

[6]These goals have been revised to reflect major program restructuring. For example, the goals for the Transportation Program Area include GHG reduction goals for the Transportation Partner Program through 2001. The 2002 Transportation goal has been revised downward to reflect the elimination of the Transportation Partners Program. The revised estimates in each area are based on preliminary results submitted for the Third National Communication to the U.N. FCCC.

Table 3. Program Accomplishments for EPA's Buildings Initiatives Through 2001

Program Area	*Accomplishments*
ENERGY STAR Program	The ENERGY STAR Buildings Partnership represents 17 percent of the U S. building floor space EPA has been successful with its public-sector work With partnerships with more than 250 colleges and universities and over 220 school districts, including for example the Los Angeles Unified School District which alone has over 650 schools, EPA brings superior building performance into the classroom Over 280 K-12 schools have earned the label EPA continues to work with small businesses and organizations to help them lower their overhead through lower energy bills Over 5,900 small businesses and organizations are working with ENERGY STAR EPA worked with building owners to offer a new benchmarking tool that identifies the most efficient 25 percent of the commercial building stock with the ENERGY STAR label EPA developed this tool for office buildings, K-12 schools were added in 2000 In 2001 EPA launched the ENERGY STAR label for grocery stores, hospitals, and hotels and is working to expand it to other key building types such as warehouses, post offices, and convenience stores Also in the public sector, EPA worked with over 220 state and local governments and organizations to overcome key financing and budgeting barriers which continue to be a major hurdle to energy efficiency projects in the public sector In 2001, EPA developed and delivered financing training (either directly or via the web) to 12 Federal departments and offices, 22 states, 61 local governments, and 69 school districts ENERGY STAR now has over 80 commercial real estate partners representing over 2 6 billion square feet comprising an estimated 80 percent of the office properties market In addition, in FY 2001 ENERGY STAR was endorsed by four influential commercial real estate industry associations including the National Association of Real Estate Investment Trust and the Society of Industrial and Office Realtors The ENERGY STAR label is recognized as the national label for energy efficiency and many players (including retailers, utilities, NGOs, etc) across the country are using the label to promote efficiency The label has achieved more than 40% public awareness as of 2001. ENERGY STAR performance specifications were developed for new product categories including set-top boxes, traffic signals, dehumidifiers, water coolers, ventilation fans, ceiling fans, telephony, light commercial HVAC, and reach-in refrigerators and freezers The program includes products that represent over 60% of energy use in the average household and can help families reduce their energy bills by up to $400 per year with currently available products that also improve home comfort More than 1,700 manufacturing companies have partnered with ENERGY STAR They produce ENERGY STAR-labeled products across more than 30 product categories More than 750 million labeled products have been purchased EPA has engaged more than 100 utilities/energy service providers that serve approximately 50% of the households in the U S in promoting energy efficiency with the ENERGY STAR label The program has partnered with more than 800 retailers to promote ENERGY STAR products in more than 7,000 storefronts across the country An international agreement was finalized allowing Canada to implement an energy efficiency labeling program for office equipment modeled after ENERGY STAR The ENERGY STAR Homes program includes more than 1,600 builder partners that have built over 25,000 labeled homes, locking in financial savings of more than $7 5 million annually for homeowners EPA continues to promote its Home Improvement Program, featuring a suite of tools and projects to help homeowners improve the energy performance of their homes during repair, remodeling or renovation The program includes a web-based audit that recommends to homeowners the top five energy efficiency improvements that can be made to their homes and a home energy benchmark tool EPA worked in partnership with more than 10 utilities and other companies to develop regional programs that promote improved duct sealing, improved home sealing, and overall improved home performance packages for the homeowner

Table 4. Program Accomplishments for EPA's Industry Initiatives Through 2001

Program Area	*Accomplishments*
Carbon Reduction Programs	ENERGY STAR for industry (formerly Climate Wise). EPA successfully integrated Climate Wise into the ENERGY STAR platform. The program now has about 500 partners representing 14% of the U.S. industrial energy use. The program continued to provide technical assistance to its partners based on the technical materials developed through the Climate Wise program and explored new technical tools with program partners that could assist companies in understanding better where cost-effective opportunities for energy efficiency improvements exist. As a result, EPA will pursue development of energy and productivity benchmarking tools at the level of the company and the level of the facility.
	EPA launched the national Combined Heat and Power Partnership, working with industrial partners to convert several hundred industrial boilers to clean, efficient, gas-fired CHP. The partnership worked with specific market segments including district energy, industry, commercial buildings, and high power quality reliability applications. EPA recognized the second round of CHP Award-winners in 2001. EPA continued to explore opportunities for regulatory flexibility to recognize the environmental benefits of CHP applications, including issuance of draft guidance for NSR source determinations.
	EPA launched the Green Power Partnership which will work with 20 founding partners and local governments to encourage green power purchases. The partnership announced 40 new corporate or local government green power purchases. The partnership launched efforts with states to promote customer choice through electricity restructuring in an environmentally friendly manner.
	Industry Partnerships. EPA continued to work with industry partners to help them better understand their greenhouse gas emissions and opportunities for cost-effectively reducing these emissions. EPA completed development of a corporate greenhouse gas inventory methodology and tracking mechanism.
	Waste Wise now has more than 1,100 partners who have reported reductions of over 9 million tons of solid waste while saving more than $300 million through the end of 1999 from waste prevention and recycling. Waste Wise began working with the Federal sector, with 75 Federal organizations as members in 2001. WasteWise initiated a sector challenge on electronics waste reduction which now includes 34 partners. EPA worked with key industry, government and NGO players in the areas of electronics, carpets, and transport packaging to begin developing agreements with national waste reduction targets.
Methane Programs	The Natural Gas STAR Program represents 77% of transmission pipeline miles, 51% of distribution pipeline miles, 40% of natural gas production, and 58% of gas processing. The Landfill Methane Outreach Program (LMOP) assisted in the development of over 20 new landfill gas-to-energy projects (bringing the total to over 200) with an additional 140 projects under construction and expected to be online soon. The LMOP provided technical and marketing support to another 150 landfills and signed on 35 new partners, bringing the total LMOP partner base to 280. The Coalbed Methane Outreach Program (CMOP) helped reduce methane emissions through project development support at 23 project sites. CMOP provided high-quality, project-specific information to project developers. EPA assisted swine and cattle producers in developing waste management systems that produce farm revenues and reduce water and air pollution. About 16 million kWh/yr of renewable energy was produced from farms capturing methane to provide energy for local communities.
Programs to Reduce High Global Warming Potential Gases	EPA continued work with 10 of the 11 U.S. primary aluminum producers representing 22 of the 23 U.S. smelters increase reductions over our 2000 goal and to better understand the generation of PFCs in the smelting process and to quantify smelter-specific emissions. EPA expanded the electric power systems partnership to reduce SF_6 emissions to 64 partners representing over 50% of net generating capacity. More than 80% of SF_6 sales are to this sector. EPA expanded the magnesium (Mg) industry partnership to reduce SF_6 emissions to 16 partners representing 100% of primary Mg production and 70% of domestic casting capacity. (80% of US Mg emissions). EPA renewed its voluntary partnership with 20 U.S. semiconductor manufacturers representing 70% of the industry's emissions. In the new MOU, EPA's semiconductor partners have established a goal to reduce PFC emissions 10% below their 1995 baseline by 2010. EPA partners with 100% of the U.S. HCFC-22 producers. These partners use process optimization and abatement to reduce production by-product emissions of HFC-23, which is the most potent and persistent of the HFCs. SNAP reviewed and listed 31 substances as acceptable alternatives to ozone-depleting chemicals in over 125 end-uses for a combined total of over 400 acceptable alternatives listed; cooperated with the fire protection industry to revise National Fire Protection Association Standard 2001 on Clean Agent Halon Alternatives, and encouraged the development of new, less-emissive technologies including secondary loop refrigeration systems and adoption of responsible use practices by the fire protection industry for gases with high global warming potential.

Table 5. Program Accomplishments for EPA's Transportation Initiatives Through 2001

Program Area	*Accomplishments*
Transportation Efficiency	EPA launched the Voluntary Ground Freight Initiative and the Variable Priced Insurance Initiative GHG Emission reduction estimates completed for 3rd National Communication Report to the U.N FCCC Updated GHG inventory estimates were published on schedule, and work has started on a separate Transportation Sector GHG report. EPA held an international transportation and climate workshop in April 2001. EPA signed and is supporting over 200 Commuter Choice Partnership Agreements with a range of industries, businesses, universities, and state and local governments representing over 150,000 employees In addition, a national network of employer recruiters has been established, and a working partnership with US DOT is in place EPA is implementing the National SIP Land Use Policy and has partnered with 6 state and local governments to recognize the transportation emission reduction benefits of smart growth and voluntary land use policies. Two new analytic tools are being developed that will assist governments interested in quantifying the emission benefits associated with Transit Oriented Development and mixed use developments Final pilot year for 60 communities implementing EPA/DOT's "It All Adds Up to Cleaner Air" Creation of more formal partnership program Development of the Alliance for Clean Air and Transportation, a national partnership of Federal agencies and national health, transportation, industry and environmental organizations committed to developing consistent national messages around air quality and transportation Initial year saw over 20 organizations joining the executive committee EPA developed and launched the Clean Air Transportation Communities Program to spur innovation and measurable reductions in transportation-related emissions by decreasing vehicle miles traveled and increasing use of cleaner technologies. First 10 award recipients selected Recipients will implement innovative pilot projects at the state, regional, local and Tribal level. These are two-year awards
Clean Automotive Technology	EPA demonstrated 80 miles per gallon (gasoline-equivalent) on a mid-size research chassis with a state-of-the-art diesel engine and an EPA-invented, patented, and developed hybrid drivetrain

Table 6. Program Accomplishments for Other Initiatives Through 2001

Program Area	*Accomplishments*
Carbon Removal	The carbon sequestration program continued to work collaboratively with the U.S Department of Agriculture (USDA) on domestic pilot programs, designed to address major issues related to implementation of sequestration projects both domestically and internationally EPA continued to enhance its state-of-the-art capability to evaluate the technical and economic potential of carbon sequestration in both the forest and agriculture sectors, and conducted key analyses on sequestration policy issues. EPA initiated efforts to better understand, quantify and resolve key scientific issues including those related to the ancillary impacts of carbon sequestration and indirect effects
State and Local Outreach Program	EPA has 39 state partners, representing approximately 80% of U S carbon dioxide emissions EPA increased state and local capacity to quantify greenhouse gas emissions and develop and implement actions to reduce greenhouse gases 36 states have completed greenhouse gas inventories, 3 states (Oklahoma, Wyoming, West Virginia) initiated inventories in 2001, 21 states have developed greenhouse gas action plans, 2 states (Maryland, Rhode Island) initiated greenhouse gas action plans EPA developed analytical tools to support future state greenhouse gas inventories. Twenty-two U.S cities joined the "*Cities for Climate Protection Campaign*" bringing total U.S participants to 109, with a combined population of over 44 million EPA has funded 16 state and local demonstration projects throughout the U S. since 1990 Projects completed or underway have achieved total emissions reductions of approximately 2 MMTCE per year. EPA completed and distributed over 4,200 copies of the EPA State and Local Climate Change Outreach Kit to educate stakeholders on the science, impacts, resources and solutions addressing climate change EPA published the NOx Set-Aside Measurement and Verification Guidance EPA continued to work with city and state governments to help them estimate the potential environmental benefits associated with heat island reduction measures. EPA published scientific assessment study results (state/regional sea level rise maps) EPA communicated with key audiences regarding climate change through publications, conference presentations, and an award-winning website

Table 6. Program Accomplishments for Other Initiatives Through 2001 (continued)

Program Area	*Accomplishments*
International Capacity Building	EPA leveraged U S experience with market-based mechanisms to help other countries design effective market-based programs EPA supported the development of rigorous bottom-up greenhouse gas inventories in 4 regions of Russia and in Kazakhstan, including energy fuel balances, and national estimates of selected sources such as coal mining; EPA projects in the countries of the former Soviet Union have reduced greenhouse gas emissions by more than a million metric tons of carbon equivalent in the last five years EPA, with the Agency for International Development (AID) and DOE, assisted 26 developing countries that submitted their National Communications as required under the UNFCCC EPA and the U S. Initiative on Joint Implementation evaluated and approved 52 voluntary projects, involving over $2 billion in potential investments, of which $700 million has been committed, in more than 26 developing and transition countries EPA and the U S Country Studies Program assisted 56 developing and transition countries inventory their GHG emissions and evaluate strategies for reducing GHG emissions as well as adapting to climate change EPA established partnerships with key developing countries to share and transfer energy efficiency program models developed in the U S. Current programs will reduce greenhouse gas emissions in 2010 by 8 MMTCE EPA in cooperation with AID, DOE, and the State Department, supported the Technology Cooperation Agreements Pilot Project with 7 developing countries Existing programs are models for international technology transfer programs and will substantially reduce greenhouse gas emissions in key countries EPA's Integrated Environmental Strategies Program, with cooperation from AID, assisted 8 developing countries to evaluate the environmental and human health benefits of technologies and policies for reducing greenhouse gas emissions Four of these countries produced initial evaluations and implementation plans for multiple benefits strategies EPA initiated a new international transportation outreach program to improve GHG inventories and advance mitigation strategies with developing countries
Global Change Research	EPA determined the impacts of global change on coastal ecosystems in the Gulf Coast Mid-Atlantic, and Great Lakes EPA completed 3 assessments - Mid-Atlantic, Great Lakes, & Human Health- of the potential consequences of global change & climate variability for the USGCRP National Assessment EPA assessed the potential impacts of climate change and variability for public health

Program Goals and Objectives for FY 2003 and Beyond

Despite the significant accomplishments of EPA's programs to date, there remain large opportunities to achieve further pollution reductions and energy bill savings from energy efficiency programs and greater use of cost-effective renewable energy. In the U.S., energy consumption causes more than 85 percent of the major air emissions such as NO_x, SO_2, and CO_2. At the same time, American families and businesses spend over $600 billion each year on energy bills – more than we spend on education. Technologies are available today that can cut this energy use significantly. Other technologies are being developed that may provide even more dramatic opportunities – such as transferring the highly efficient hybrid powertrain components, originally developed for passenger car applications, to meet the more demanding size, performance, durability, and towing requirements of Sport Utility Vehicles (SUVs) and urban delivery vehicle applications, resulting in increased fuel economy.

Over the next several years, EPA will build upon its voluntary government/industry partnership efforts to achieve even greater greenhouse gas reductions by taking advantage of additional opportunities to simultaneously reduce pollution and energy bills. EPA will continue to break down market barriers and foster energy efficiency programs, products and technologies, cost-effective renewable energy, and greater transportation choices. EPA will continue to work closely with state and local partners to assess the air quality, health, and economic benefits of reducing greenhouse gas emissions and developing practical risk reduction strategies. It will establish

international partnerships that will link industrial efficiency, reduction of greenhouse gases, and sustainable development. In FY 2003, EPA's climate change programs are projected to:

- reduce greenhouse gas emissions from projected levels by more than 73.5 MMTCE annually through its programs, reducing the growth in greenhouse gas emissions above 1990 levels by about 20%;
- reduce U.S. energy consumption from projected levels by more than 95 billion kilowatt hours annually;
- reduce other forms of pollution, including air pollutants such as NO_x, particulate matter and mercury from energy efficiency and reduce water pollution (from better fertilizer management.) NO_x emissions will be reduced by over 205 thousand tons;
- contribute to over $11 billion in net energy bill savings to consumers and businesses that use energy efficient products for the year;
- demonstrate technology for a hydraulic-hybrid SUV system that achieves at least 20% better fuel economy than the typical baseline vehicle (24.2 mpg based on a "typical" 20.2 mpg baseline SUV);
- provide more flexible and energy efficient alternatives for commuters and freight transporters, and reduce vehicle miles traveled by more than two billion miles;
- assist 10 key developing countries and countries with economies-in-transition in building their capacity to reduce emissions of greenhouse gases through cost-effective measures and participate actively in international discussions of climate protection and assist in the fulfillment of the U.S. obligations under the UNFCCC to facilitate technology transfer to developing countries;
- produce measurable international greenhouse gas emission reductions through clean industrialization partnerships with key developing countries;
- in close cooperation with USDA, identify and develop specific opportunities to sequester carbon in agricultural soils, forests, other vegetation and commercial products, with collateral benefits for productivity and the environment; and
- assess the consequences of global change on human health and ecosystems.

EPA will be working towards the following goals in each of the following program areas over the next ten years:

- Buildings: The Buildings Sector represents one of EPA's largest areas of potential, and at the same time is one of its most successful. In the buildings sector, EPA will expand upon the successful ENERGY STAR partnerships (including ENERGY STAR Labeling and the ENERGY STAR Buildings Program). EPA will work toward the goal of offsetting about 24% of the growth in greenhouse gas emissions above 1990 levels expected by 2010 in this sector. EPA's programs will contribute about 43 MMTCE annually in greenhouse gas reductions by 2010 while saving businesses and consumers more than $14 billion. The efforts necessary in FY 2003 to continue to achieve these 2010 goals are detailed in Table 7.

- Industry: EPA will continue to build on the success of the voluntary programs in the industrial sector, focusing on reducing CO_2 emissions and continuing the highly successful initiatives to reduce methane emissions and emissions of the high global-warming-potential gases. EPA's goals for these efforts are: (1) greatly enhance the rate of energy and resource efficiency improvements in industry between now and 2010 (working with DOE); (2) cost-effectively return emissions of methane to 1990 levels or below by 2010; (3) cost-effectively limit emissions of the more potent greenhouse gases (HFCs, PFCs, SF_6); and (4) facilitate the use of clean energy technologies and purchases of renewable energy. EPA's goal is to deliver an estimated 85 MMTCE annually by 2010 from these efforts. The efforts necessary in FY 2003 to continue to achieve these 2010 goals are detailed in Table 8.

- Transportation: EPA will continue to grow its successful transportation efficiency initiatives including its voluntary Commuter Choice Partnership Program, Ground Freight Management Initiative, Clean Air Transportation Communities award program, and Smart Growth initiatives. These programs will deliver communities, commuters, and the freight delivery industry substantial energy savings and increased access to jobs, health care, education and recreation. EPA's Variable Priced Auto Insurance initiative also shows tremendous potential for partnering with the insurance industry commissioners to provide a voluntary incentive for less driving.

  EPA will continue its Clean Automotive Technology (CAT) initiative to develop advanced, clean and fuel efficient automotive technology in accordance with the National Energy Policy (NEP) directive to use technological advances to better protect the environment and save energy. EPA has demonstrated the potential of its break-through technologies to provide dramatic fuel economy improvement in cars, and this technology can be transferred to SUVs and urban delivery vehicles and will have an unprecedented impact on fuel consumption. CAT includes research activities and Cooperative Research and Development Agreements (CRADAs) with the automotive industry covering both SUVs and urban delivery vehicles. This initiative will help enable the transfer of patented technology to SUVs and urban delivery vehicles – a critical target for improving the U.S. fleet miles per gallon.

  During FY 2003, CAT will continue to meet its CRADA commitments by developing advancements for engine and powertrain technology for hydraulic hybrid vehicles. EPA will collaborate with its CRADA partners to transfer the unique EPA-patented, highly efficient hybrid engine and powertrain components, originally developed for passenger car applications, to meet the more demanding size, performance, durability and towing requirements of SUVs and urban delivery vehicle applications while being practical and affordable with ultra low emissions and ultra high fuel efficiency. The successful technology development under CAT has laid the foundation for cost-effective commercialization of high fuel economy/low emission vehicles for delivery to market between 2005 and 2010. The R&D development under the CAT initiative has stringent criteria emission goals supporting EPA's clean air mission through new stringent emission standards. This initiative will yield technologies that will allow future SUV and urban

delivery vehicles to be simultaneously very efficient and very clean. On a per-vehicle basis, these technologies will generate a 50% reduction in greenhouse gas emissions relative to current baseline vehicles.

EPA's Clean Automotive Technology initiative will provide the following benefits.

- Allow EPA to develop unique engine and hybrid technology for SUVs and urban delivery vehicles, resulting in increased SUV fuel efficiency of 30% (from 2001 baseline of 20.2 mpg) by 2006 and up to 100% by 2010.
- With the successful development and adoption of this cost effective and practicable technology (facilitated by complementary policies), we estimate the eventual market penetration for this technology to be up to 40-50% in 2020.
- This would result in potential annual fuel savings of up to 8 billion gallons (4% below business-as-usual) or the rough equivalent 25 MMTCE reduced in 2020 (from light duty trucks including SUVs.)

EPA will also support DOT and the Treasury Department in implementing any change to the CAFÉ standards and vehicle tax credits for hybrid and fuel-cell vehicles.

The efforts necessary in FY 2003 to achieve these goals are detailed in Table 9.

- Carbon Removal: EPA will build domestic and international consensus around the integration of carbon sequestration activities into a comprehensive climate strategy Carbon can be sequestered through changes in both forestry and agricultural practices, but these actions are not currently well understood or accepted in many sectors of the international and environmental communities. EPA is working collaboratively with USDA to address the misperceptions regarding carbon sequestration and to ensure that this important mitigation option is developed in an environmentally sound and economically efficient way. EPA and USDA will identify and develop specific opportunities to sequester carbon in agricultural soils, forests, other vegetation and commercial products, with collateral benefits for productivity and the environment. EPA's goal is to achieve a carbon removal potential of up to 25 MMTCE by 2010. The efforts necessary in FY 2003 to achieve these 2010 goals are detailed in Table 10.

- State and Local: States and localities have a significant and important role in reducing greenhouse gases, provided they are equipped with the tools they need to integrate climate change into their daily decisions. The State and Local program responds to this need by providing guidance and technical information about the air quality, health, and economic benefits of reducing greenhouse gas emissions and developing practical risk reduction strategies. EPA will continue its efforts to build capacity and to provide state and local governments with technical, outreach and/or education services about climate change impacts, mitigation and adaptation, and related issues so that state and local governments

may more effectively address their environmental and economic goals in a comprehensive manner. These efforts are detailed in Table 10.

- International Capacity Building: EPA is working with a number of key developing countries on a voluntary basis to help them: 1) design and implement programs to increase the use of low and zero greenhouse gas technologies; 2) identify, evaluate and implement strategies for achieving multiple social and health or economic benefits while reducing greenhouse gas emissions; 3) design market-based systems to facilitate commitments by these countries under the FCCC as well as the infrastructure necessary to ensure compliance; and 4) accurately assess GHG emissions from the transportation sector and implement less energy intensive transportation strategies. Over the next ten years, EPA's goals are to: 1) catalyze significant increases in voluntary, market-driven programs for increasing the use of low and zero greenhouse gas technologies; 2) achieve the full integration of climate considerations into countries' development plans; and 3) establish the technical basis for major developing countries to make significant commitments under the Climate Convention. The efforts necessary in FY 2003 to meet these goals are detailed in Table 10.

- Global Change Research: EPA is one of ten Federal agencies contributing to the National Assessment activities organized through the U.S. Global Change Research Program (USGCRP). The National Assessment is an ongoing process mandated by Global Change Research Act of 1990, with periodic reports to Congress which began in FY 2000 and occur not less than every four years thereafter. In FY 2003 the Global Change Research Program will continue to support the ongoing U.S. National Assessment and other related USGCRP assessment activities.

  Consistent with the EPA's *Global Change Research Strategy*, which articulates the program's long-term goals for developing comprehensive assessments of global change issues and the research to support such efforts, the effects of stressors such as climate change, land use change, and UV-B radiation will be investigated in FY 2003. This research will focus on building the capacity to assess global change impacts on air quality by downscaling meteorological data to regional scales and quantifying the effects of advanced fuel/vehicle combinations. Other components of these research and assessment activities will focus on producing an assessment report in FY 2003 on the potential effects of climate change on weather-related morbidity and reporting on interactive effects of UV-B and temperature on corals. To help assess impacts of UV-B on ecosystem and human health, EPA will continue to operate the UV-B monitoring network.

  The particular areas of focus for the research and assessment activities of the Global Change Research Program are: (1) human health; (2) air quality; (3) water quality; and (4) aquatic ecosystem health. These activities will develop integrated human health and ecosystem health assessments. In FY 2003, the program will continue to assess the potential consequences of:

- Changes in extreme weather (heat and cold) for human mortality and morbidity;
- Changes in air quality;
- Climate and land-use changes on water and vector-borne diseases;
- Climate change on aquatic ecosystems; and
- Climate change on water quality (pollutants and microbial pathogens).

Significant FY 2003 research products are detailed in Table 10.

Table 7. Buildings Programs: Description of Planned Activities Within FY 2003 Budget Request

ENERGY STAR Buildings	Actively promote EPA's new buildings benchmarking tool and work with building owners and managers to benchmark a total of 29,000 buildings across office buildings, schools, Federal and state facilities, retail spaces, hotels/motels and post offices. Award 2,750 additional ENERGY STAR labels to buildings that reach a benchmark score between 75 and 100 Expand building energy performance benchmarking and outreach to five additional building and facility types providing benchmarking capabilities for more than 80% of the total U S floor space Continue to actively recruit new small businesses and organizations into ENERGY STAR for small business to reach over 7,000 participants by the end of 2003. Expand public sector work to increase the number of partnerships with schools and universities and state and local governments to over 1200. Expand work to improve the efficiency of the Federal government – work with other agencies to implement key pieces of the Federal Executive Order on building energy efficiency, particularly focusing on assisting agencies to benchmark their buildings and to procure energy efficient products.
ENERGY STAR Products	Develop and implement a new public awareness campaign on energy efficiency to achieve 50% recognition of the ENERGY STAR label in the U.S. Coordinate with utility and state partners representing more than 65% of U.S. households in the design and operation of effective state-level energy efficiency programs. Review five new product categories such as vending machines commercial food service equipment, and air purifiers . for potential expansion of the ENERGY STAR label. Enhance ENERGY STAR labeled product quality through a review of performance specifications for five product categories such as office equipment and consumer electronics. Continue working with retailers and equipment contractors to ensure that consumers receive clear information when in the market to purchase products Continue working in partnership with the European Community and Canada in implementing an energy efficiency labeling program for office equipment modeled after ENERGY STAR. Promote the purchase of about 160 million ENERGY STAR labeled products in 2003.
ENERGY STAR Homes	Over 50,000 new homes are expected to be constructed as ENERGY STAR in 2003 Promote ENERGY STAR Labeled New Homes in 15 geographic areas. Expand ENERGY STAR to include 80% of the housing stock of the national builders, Pulte, Ryan and Centex. Expand ENERGY STAR in the modular housing industry to include 50% of their housing stock. Achieve 50% penetration of ENERGY STAR in the manufactured housing industry. Promote ENERGY STAR to state and local housing authorities as the platform for their affordable housing programs. Expand the national Duct and Home Sealing Program for existing homes. Expand a whole house upgrade program that encourages home owners to consider energy efficiency improvements when performing whole-house renovation to geographic areas that can provide suitable contractor infrastructure. Promote benchmarking as a major tool to spur homeowners to make energy efficiency home improvements.

Table 8. Industry Programs: Description of Planned Activities Within FY 2003 Budget Request	
ENERGY STAR for industry (formerly Climate Wise)	Expand the ENERGY STAR program for industry to more than 440 industrial partners Enhance technical assistance provided to the industrial sector by developing energy and related productivity benchmarks of industrial plant performance for five additional U S. industries. Expand the energy peer exchange networking opportunities for U S industry and the ENERGY STAR partners by holding three national networking meetings. Conduct two industrial sector focus sessions to recruit two industrial sectors to partner with ENERGY STAR to improve their energy performance
Combined Heat and Power Initiative	Implement national CHP Partnership Program. The Partnership Program will work with several hundred industrial coal-fired boilers in specific market segments for conversion to clean, efficient gas-fired CHP. Develop more specific permitting guidance for CHP projects Promote recognition of CHP's benefits in environmental regulations.
Green Power Initiative	Implement Green Power Partnership Program. The program will work with founding partners and local governments to remove market barriers to renewable ("green") power purchases. The program will work with over 100 corporate/local government green power purchases, allowing companies to receive recognition for the environmental benefits of their purchases. Continue efforts working with states to promote consumer choice through electricity restructuring in an environmentally friendly manner.
Industry Partnerships	Continue efforts with industry partners to help them better understand their greenhouse gas emissions and opportunities for cost-effectively reducing these emissions. Continue to improve greenhouse gas tracking guidelines for industry.
Waste Wise	Expand WasteWise to include 1,400 partners. Continue to provide direct technical assistance for resource management, a performance-based contracting approach to overcome market barriers to waste reduction in the waste service industry. Continue Product Stewardship as a comprehensive national approach for electronics recycling with tangible industry commitments and state support, leading to measurable increases in electronics recycling and associated climate benefits. In addition, continue to pursue national targets for carpet recovery and meaningful increases in packaging recycling rates. Continue waste-related Greenbuildings efforts in the areas of criteria development and WasteWise recycled-content building challenges EPA will spur demand for recovered materials by supporting materials and improved waste management for Greenbuilding programs, partnering with industry and states, and responding to request for technical assistance. Work with stakeholders in developing a comprehensive waste sector strategy for greenhouse gas reductions
Table 8. Industry Programs: Description of Planned Activities Within FY 2003 Budget Request (continued)	
Methane Programs	Expand the Natural Gas STAR program in all sectors to represent 85% of gas transmission pipelines, 59% of distribution service connections, 46% of domestic gas production, and 70% of gas processing. Expand EPA's Coalbed Methane Outreach Program (CMOP) to work with key stakeholders to expand the market for new greenhouse gas reduction technologies, including flares at wells producing medium quality gas and combustion technologies appropriate for mine ventilation air. EPA will continue to provide technical assistance to mining operations as well as monitor and analyze the results from two demonstration projects. Expand the Landfill Methane Outreach Program (LMOP) to assist a total of 233 landfills with gas utilization projects, to promote newer energy applications, and to increase methane recovery efficiency at existing projects. In the agriculture sector, continue expansion of methane-reducing technologies, such as anaerobic digesters, to help ensure clean water and air for the livestock sector.

Programs to Reduce High Global Warming Potential Gases	The Voluntary Aluminum Industry Partnership (VAIP) will continue to deliver reductions, with VAIP participants reducing the industry's emissions of PFCs by at least 45% percent from the 1990 baseline year.
	Work with the U S. semiconductor partners to achieve their 10% PFC emissions reduction goal by 2010 from their 1995 baseline.
	Continue to build the SF_6 Emissions Reduction Partnership for Electric Power systems (utilities) to include partners representing 60% of the industry's net generating capacity.
	Expand participation in the SF_6 Emission Reduction Partnership for the Magnesium Industry to represent greater than 80% of U.S. industry emissions. Facilitate global information sharing to achieve cost effective emission reductions of 0.3 MMTCE
	Maintain an effective partnership with HCFC-22 chemical manufacturers to reduce emissions of HFC-23.
	Expand the stewardship programs to reduce high global-warming-potential emissions from other key sources such as the military and ODS replacement industries.
	SNAP expects to review and list 10 alternatives to ozone-depleting substances, focusing on the identification of safe and energy-efficient substitutes, including HFCs, for HCFCs in various sectors

Table 9 . Transportation Programs: Description of Planned Activities Within FY 2003 Budget Request	
Transportation Efficiency	Continue implementation of the Commuter Choice Partnership Program – build national business partnership program that takes advantage of recent tax code changes that provide financial incentives for green commuting options. Maintain over 300 partners and extend to over 1,000 partners. Expand implementation of the Ground Freight Management Initiative by increasing number of voluntary partnerships with freight industry to implement energy efficient technologies, freight management practices, and infrastructure opportunities (including E-commerce) that substantially reduce GHG and criteria air pollutants. Create and launch Green Transportation Outreach Program. Create & implement program which is on par with Energy Star – quick and easy way to differentiate clean from dirty transport, commuting, fuels, vehicles including vehicle labeling, etc. Continue implementation of Variable Priced Insurance Initiative through increased partnering with insurance industry. Work with automobile manufactures to integrate GPS systems with variable-price insurance options Expand implementation of the Clean Air Transportation Communities Program Catalyze and support community innovations that result in measurable reductions in VMT and cleaner technologies. Maintain 10 state and local projects and expand to include an additional 10 projects Promote Smart Growth through the newly finalized SIP Land Use Guidance – Maintain 5 state and local partnership efforts and partner with an additional 5 states to further Smart Growth and Air Quality goals. Continue Transportation Planning Partnerships to 1) integrate induced travel estimates into metropolitan transportation plans; 2) establish regional methodology for capturing land use air quality benefits, and (3) undertake educational efforts to promote tools that will enhance smart growth efforts and transportation equity across U S In partnership with DOT, assess and develop adaptation strategies to address the impact of sea-level rise and increased storm events on transportation infrastructure. Continue implementation of the Outreach/Public Education Programs TRAQ Center and "It All Adds Up to Cleaner Air" -- Increase public awareness of Transportation/Air Quality Connection. Continue support for state-of-the-art website for multi-state, state, local, Tribal transportation/air quality professionals Establish a partnership program with states, localities and industry to recognize significant progress on the use of alternative fuel vehicles (AFVs). EPA, in cooperation with DOT and DOE, will promote and encourage the use of dedicated, clean AFVs, such as compressed natural gas (CNG), electric and fuel-cell vehicles Continue to fulfill statutory obligations in the fuel economy arena, which includes administering the fuel economy labeling, gas guzzler, gas mileage guide, and CAFÉ programs in conjunction with other government agencies Develop projects to reduce diesel idling time at truck stops and along highways. EPA will partner with states and manufacturers of idling control devices to help install idle control technologies on trucks and at truck stops that could save one gallon of diesel fuel for each hour a vehicle idles Conduct outreach efforts to promote public awareness of and to implement future enhancements to the Green Vehicle Guide Web Site that was launched in 2000.
Clean Automotive Technology (CAT)	Continue engineering programs to transform the highly efficient light-duty engine and hybrid powertrain components to meet the more demanding size, performance, and towing requirements of personal Sport Utility Vehicles (SUVs) and urban delivery vehicles while demonstrating compliance with the Tier II and 2007 emission standards for diesel-cycle engines

Table 10. Other Programs: Description of Planned Activities Within FY 2003 Budget Request	
Carbon Removal	Continue to collaborate with USDA on the pilot projects and determine the viability of various carbon sequestration activities as quantifiable means of limiting greenhouse gas emissions Continue work on enhancing the ability of major macroeconomic models to evaluate the economic value of carbon sequestration and fully appreciating the role of carbon sequestration in addressing climate change. Bring together leading experts from government, industry, and the research community to address several difficult issues related to sequestration projects, including permanence, leakage, monitoring, and verification. Enhance efforts to better quantify the ancillary impacts of carbon sequestration Work with stakeholders in the forestry and agriculture sectors to promote the development of environmentally sustainable and economically attractive carbon sequestration projects domestically and internationally
State and Local	Continue to assist state and local governments in initiating and updating greenhouse gas inventories assessing climate change policy impacts on state and local economies Assess and disseminate information about the multiple benefits of greenhouse gas mitigation, including environmental, health, energy, and economic benefits Finalize and distribute new tools and models that build understanding of the broader benefits of climate protection Integrate GHG emission reduction strategies in State Implementation Plans (SIPs), for states that want to provide credits for GHG reductions Develop tools to facilitate voluntary adoption of heat island reduction activities, including ways to integrate them into in SIPs Continue to build state and local capacity to address climate change through improved outreach tools and products, such as through improvements to the EPA Global Warming Site, creation of a best practices clearinghouse to promote multi-pollutant emission reduction strategies (e.g., energy efficiency, sustainability, clean energy, and other GHG mitigation measures), an updated catalogue of state legislative activity related to greenhouse gases, and the identification and implementation of additional demonstration projects Translate key scientific findings into a format more readily understandable to the public Increase awareness of global, regional, and local impacts of climate change for targeted groups, including outdoor enthusiasts, coastal communities and decision makers in key business sectors Gather stakeholder input to develop performance metrics and evaluate effectiveness of communication Develop risk reduction strategies to encourage effective public response to climate change, including development of a strategic coastal response program.
International Capacity Building	Continue and expand cooperation with China, Mexico, Brazil, Korea South Africa, and India. Create an air quality and transportation policy toolkit which, in cooperation with the World Bank and other partners, would be shared with 12-16 countries Build the capacity in 4-5 major emitter countries (China, India Russia, Brazil, and Indonesia) to develop reliable emission inventories in support of sustained emissions reduction strategies Enhance capacity for energy and GHG audits for selected industrial sectors (such as cement, iron, and steel) in 4-5 major emitter countries Establish regional energy and GHG information networks in three major regions of the world Build regional centers of financial expertise in Russia and China for climate and energy projects. Assess health benefits, and design of compliance infrastructure and market-based mechanisms, in order to increase incentives and capacities for a more level environmental playing field internationally Enhance international expert networks and cooperate with other organizations such as AID, the World Health Organization, UNEP, the World Bank, the Global Environment Facility, and state and local government partners in the U.S. to expand development and application of capacity for quantifying multiple benefits and to promote implementation of clean technology strategies. Enhance capacity with partners in key developing countries, and promote implementation of voluntary programs and market-based mechanisms to expand utilization of clean technologies and greenhouse gas emissions reductions through market transformation Work with export credit agencies, international organizations, and commercial finance institutions to identify and overcome barriers to commercial investment in clean technologies in developing countries
Global Change Research	EPA will produce a final, comprehensive assessment report which quantifies the potential effects of climate change on weather-related morbidity In support of the air quality assessments, EPA will produce an interim assessment of how technological changes may affect emissions of ozone precursors and PM EPA will produce a preliminary analysis of meteorological data and air quality using statistical methods

FY 2003 Change from FY 2002 Enacted

S&T:

- (-$750,000) The FY 2003 request is $750,000 below the FY 2002 Enacted budget level due to a Congressional earmark received during the FY 2002 appropriations process which was not included in the FY 2003 President's Request.

- (-$9,300,000) Of the original $26,400,000 in the Partnership for a New Generation of Vehicles (PNGV) program, EPA will target $17,100,000 for work with our CRADA partners under the Clean Automotive Technology (CAT) initiative to support continued development of unique engine and hybrid technology for SUVs and urban delivery vehicles, with no compromise in performance, safety, or emissions. However, the $9,100,000 reduction will eliminate work on high-efficiency renewable fuel engines, as well as the development of a production prototype 85 mpg family-size.

Research

S&T

- (+4,194,600, +1.0 FTE) Resources within this Objective will be shifted from human dimensions research to research focusing on the effects of global change on air quality, and the effects of global change on aquatic ecosystems. The air quality research will involve the development of models and methodologies for analyzing the consequences of global change on regional air quality, including downscaling global meteorology to regional meteorology; developing models and methodologies to address temporal and spatial scale issues for regional emissions drivers; and development of techniques to link technological change to changes in regional and local emission inventories. The aquatic ecosystem research will involve the development of scenarios and tools to support planned assessments of the impacts of global change on aquatic ecosystems. This research will include development of ecologically relevant scenarios of land use change; pathways from ecological functioning to aquatic ecosystem goods and services; human responses to global change; effects of global change on the distributions of invasive species; and effects of changing temperature, precipitation, land use, UV radiation and sea level rise on multiple aquatic ecosystems.

- (-$4,194,600, -1.0 FTE) This planned decrease within the Objective is a shift from human dimensions research and assessment activities, completed in FY 2002, to ecosystem and human resilience to global change, and research focusing on the consequences of global change on air quality.

- (+$255,200, +2.0 FTE) This increase will supplement ongoing research and assessment activities which contribute to the Second National Assessment. In particular, these activities will include an examination of the potential regional effects of global change (especially climate change and climate variability) on ecosystem health and ecosystem services in the United States. Particular

attention will be given to the direct and indirect effects of global change of aquatic ecosystems.

Annual Performance Goals and Measures

Reduce Greenhouse Gas Emissions

In 2003 Greenhouse gas emissions will be reduced from projected levels by approximately 73 5 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%

In 2002 Greenhouse gas emissions will be reduced from projected levels by approximately 65.8 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%

In 2001 The date for this annual performance goal will not be finalized until mid 2002

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Annual Greenhouse Gas Reductions - All EPA Programs	6/30/02	65 8	73 5	MMTCE
Greenhouse Gas Reductions from EPA's Buildings Sector Programs (ENERGY STAR)	6/30/02	17 2	19 5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Efficiency/Waste Management Programs	6/30/02	6 3	6.5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Methane Outreach Programs	6/30/02	16 3	17.5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial HFC/PFC Programs	6/30/02	21 9	25 6	MMTCE
Greenhouse Gas Reductions from EPA's Transportation Programs	6/30/02	2 1	2.4	MMTCE
Greenhouse Gas Reductions from EPA's State and Local Programs	6/30/02	2 0	2 0	MMTCE

Baseline The baseline for evaluating program performance is a forecast of U.S. greenhouse gas emissions in the absence of the Climate Change Action Plan programs The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan The updated baseline includes energy forecasts and economic growth projections The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update. The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001.

Reduce Energy Consumption

In 2003 Reduce energy consumption from projected levels by more than 95 billion kilowatt hours, contributing to over $11 billion in energy savings to consumers and businesses

In 2002 Reduce energy consumption from projected levels by more than 85 billion kilowatt hours, contributing to over $10 billion in energy savings to consumers and businesses.

In 2001 The data for this annual performance goal will not be finalized until mid-2002

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Annual Energy Savings - All EPA Programs	On track	85	95	Billion kWh

Baseline The baseline for evaluating program performance is a forecast of U.S greenhouse gas emissions in the absence of the Climate Change Action Plan programs The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan The updated baseline includes energy forecasts and economic growth projections The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001

Clean Automotive Technology

In 2003 Transfer hybrid powertrain components, originally developed for passenger car applications, to meet size, performance, durability, and towing requirements of Sport Utility Vehicle and urban delivery vehicle applications with an average fuel economy improvement of 20% over the baseline

In 2002 Transfer hybrid powertrain components, originally developed for passenger car applications, to meet size, performance, durability, and towing requirements of Sport Utility Vehicle and urban delivery vehicle applications with an average fuel economy improvement of 15% over the baseline

In 2001 Transfer hybrid powertrain components, originally developed for passenger car applications, to meet size, performance, durability, and towing requirements of Sport Utility Vehicle and urban delivery vehicle applications with an average fuel economy improvement of 10% over the baseline

Performance Measures.	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Fuel Economy of EPA-Developed SUV Hybrid Vehicle over EPA Driving Cycles Tested	22 2	23 2	24.2	MPG

Baseline: The average fuel economy of all SUVs sold in the US in 2001 is 20.2 mpg Values for 2001, 2002, and 2003 represent 10%, 15%, and 20% improvements over this baseline, respectively The long-term target is to demonstrate a practical and affordable powertrain that is 30% more efficient by 2005, and 100% more efficient by 2010

Research

Global Change Research - Human Health and Ecosyste

In 2003 Assess the potential effects of climate change on weather-related morbidity.

In 2003 Build the capacity to assess global change impacts on air quality by downscaling meteorological data to regional scales and quantifying the effects of advanced fuel/vehicle combinations.

In 2002 Complete all contributing research and a report on the problem formulation phase of an assessment of the consequences of climate change on human health -- specifically, weather-related morbidity -- at the national and regional levels

In 2002 Complete the problem formulation phase of an assessment of the consequences of global change on air quality at a regional level

In 2002 Complete the problem formulation phase of an assessment of the consequences of global change on aquatic ecosystems at a regional level

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

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Report on the potential effects of climate change on urban air quality	0			report
Preliminary report assessing potential health effects of global change by linking human health and ecological risk.	1			report
Complete initial assessment of air quality impacts of several potential transportation sector technology paths as input to a study of global change on tropospheric ozone concentrations.	1			assessment
External review draft on the effects of climate change on weather-related morbidity in the U S		1		report
External review draft of a report on the effects of global change on air quality in the US		1		Draft report
Publish reports supporting analysis of the comparative risk of UV radiation and habitat quality to amphibian populations across N America in support of US Global Change Research Program assessments		09/30/2002		analysis
External review draft of a problem formulation report on the effects of global change on aquatic ecosystems in the U S		1		report
Produce a final, comprehensive assessment report which quantifies the potential effects of climate change on weather-			1	report

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
related morbidity.					
In support of the air quality assessments, produce interim assessment of how advancements in hydrogen/fuel cell and gasoline hybrid vehicles affect emissions of ozone precursors and PM.				1	assessment
Produce a preliminary analysis of meterological data and air quality using statistical methods				1	analysis
Peer-reviewed reports for decision-makers and the public on the potential consequences of global change on 3 regions and on human health, which are the finished products of a multi-year effort		3			reports

Baseline In April 2000, the Health Sector Assessment Team participating in the first USGCRP National Assessment of the "Potential Consequences of Climate Variability and Change" published its Executive Summary. The entire assessment was published in May 2001 as a Special Issue of Environmental Health Perspectives The Health Sector Assessment report identified key remaining research needs, which included weather-related morbidity effects By the end of FY 2003, assessments will be completed of (1) heat-related morbidity in children, (2) the relationship between weather variability and violent crime, (3) the effects of inclement weather on accidents and injuries, and (4) the effects of extreme heat on emergency room visits and hospital admissions

Air pollution continues to be a widespread public health and environmental problem in the United States. Previous studies suggest that global change
(climate change and variability, UV-radiation, land use change) could have significant impacts on ambient air quality Global climate change will likely result in changes in regional and local weather While few studies have explicitly investigated the effects of global change on air quality, the available evidence (e g , weather-ozone studies, basic atmospheric chemistry, sensitivity of emissions to weather and land use, etc) raises concerns that global change could adversely affect air quality Two pollutants likely to be affected by global change are ozone and particulate matter and they are also of significant interest to the Agency By the end of FY 2003, two important components of an integrated air quality assessment will be completed (1) downscaling of global meteorological data to geographic scales appropriate for air quality assessments, and (2) quantification of the air implications of advanced fuel/vehicle combinations likely to be used to adapt to climate change

Verification and Validation of Performance Measures

Performance Measure: Annual Greenhouse Gas Reductions

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

Data Source: Baseline data for carbon emissions related to energy use comes from the Energy Information Agency (EIA). Baseline data for non-carbon dioxide (CO_2) emissions, including nitrous oxide and other global warming potential gases are maintained by EPA. EPA develops the methane emissions baselines and projections using information from partners and other sources. EPA continues to develop annual inventories as well as update methodologies as new information becomes available. EPA's voluntary programs collect partner reports on facility specific improvements (e.g. space upgraded, kilowatt-hours (KWh) reduced.) A carbon-conversion factor is used to convert this information to estimated greenhouse gas (GHG) reductions. EPA maintains a "tracking system" for emissions reductions based on the reports submitted by partners.

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

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

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

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

Performance Measure: Annual Energy Savings

Performance Database: Climate Protection Division Tracking

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

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

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

Data Limitations: The voluntary nature of programs may affect reporting

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

Coordination with Other Agencies

Voluntary climate protection programs government-wide stimulate the development and use of renewable energy technologies and energy efficient products that will help reduce greenhouse gas emissions. The effort is led by EPA and the Department of Energy (DOE) with significant involvement from USDA, Housing and Urban Development and National Institute of Standards and Technology.

Agencies throughout the government make significant contributions to the climate protection programs. For example, the DOE will pursue actions such as promoting the research, development, and deployment of advanced technologies (for example, renewable energy sources). The Treasury Department will administer proposed tax incentives for specific investments that will reduce emissions. EPA is broadening its public information transportation choices campaign as a joint effort with the DOT. EPA coordinates with each of the above-mentioned agencies to ensure that our programs are complementary and in no way duplicative.

This coordination is evident in current work being undertaken by an interagency task force, including representatives from the Department of State, EPA, DOE, USDA, DOT, OMB, Department of Commerce, USGCRP, NOAA, NASA, and the Department of Defense, to prepare the Third National Communication to the Secretariat as required under the Framework Convention on Climate Change (FCCC). The FCCC was ratified by the United States Senate in 1992. A portion of the Third National Communication will describe policies and measures (such as ENERGY STAR and EPA's Clean Automotive Technology initiative) undertaken by the U.S. to reduce greenhouse gas emissions, implementation status of the policies and measures, and their actual and projected benefits. One result of this interagency review process will be a refinement of future goals for these policies and measures which will be communicated to the Secretariat of the FCCC in 2001. The draft report "Climate Action Report 2001: The United States of America's Third National Communication Under the United Nations Framework Convention on Climate Change, draft, 2001" will be published in 2002.

Research

EPA is an active participant in the interagency U.S. Global Change Research Program (USGCRP) and the ongoing National Assessments of "The Potential Consequences of Climate Change and Variability on the United States." As part of these efforts, EPA coordinates research and assessment activities with other USGCRP agencies to ensure that an integrated Federal research and assessment program is implemented, and that agencies' activities are complementary rather than duplicative. In addition to EPA's Global Change Research program, agencies participating in the USGCRP include: the U.S. Departments of Agriculture, Commerce, Energy, Health and Human Services, Interior; the National Aeronautic and Space Administration; the National Science Foundation; and the Smithsonian

Institution.

Statutory Authorities

Clean Air Act, 42 U.S.C. 7401 et seq. - Sections 102, 103, 104, and 108

Clean Water Act, 33 U.S.C. 1251 et seq. - Section 104

Solid Waste Disposal Act, 42 U.S.C. 6901 et seq. - Section 8001

Pollution Prevention Act, 42 U.S.C. 13101 et seq. - Sections 6602, 6603, 6604, and 6605

National Environmental Policy Act, 42 U.S.C. 4321 et seq. - Section 102

Global Climate Protection Act, 15 U.S.C. 2901 - Section 1103

Federal Technology Transfer Act, 15 U.S.C. - Section 3701a

Research

U.S. Global Change Research Program Act of 1990

United Nations Framework Convention on Climate Change

National Climate Program Act of 1997

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Reduction of Global and Cross-border Environmental Risks

Objective: Reduce Stratospheric Ozone Depletion.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Reduce Stratospheric Ozone Depletion.	**$18,989.4**	**$15,843.2**	**$15,813.3**	**($29.9)**
Environmental Program & Management	$18,989 4	$15,843.2	$15,813.3	($29.9)
Total Workyears	34.8	30.1	29.7	-0.4

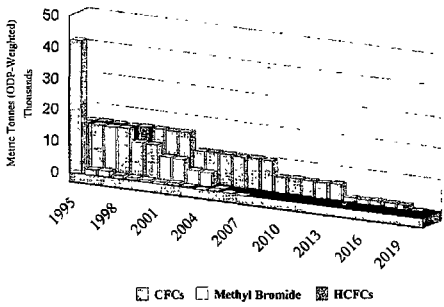
Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Administrative Services	$16 1	$0.0	$0 0	$0.0
Facilities Infrastructure and Operations	$0 0	$489.3	$419.8	($69.5)
Legal Services	$99.3	$76.5	$82 1	$5.6
Management Services and Stewardship	$379 1	$98.9	$93.4	($5.5)
Multilateral Fund	$10,975.8	$9,575.8	$9,575.8	$0 0
Stratospheric Ozone Protection	$5,771.9	$5,602.7	$5,642.2	$39.5

FY 2003 Request

The stratospheric ozone layer protects life on earth from harmful UV radiation; a depleted ozone layer allows more UV radiation to reach the earth. The increased levels of UV radiation due to ozone depletion can lead to a greater chance of overexposure to UV radiation and consequent health effects including skin cancer, cataracts, and other illnesses.[1] Today, one in five Americans develops skin cancer. Cataracts diminish the eyesight of millions of Americans and cost billions of dollars in medical care each year. EPA is helping to reduce the risks of skin cancer and cataracts by implementing the provisions of the *Montreal Protocol on Substances that Deplete the Ozone Layer* (Montreal Protocol) and the Clean Air Act Amendments of 1990 (the Act). EPA estimates that, in the United States alone, the worldwide phase-out of ozone depleting substances (ODSs) will save 6.3 million lives from fatal cases of skin cancer, and avoid 299 million cases of non-fatal skin cancer and 27.5 million cases of cataracts between 1990 and 2165.[2]

U.S. Significant Goals in Controlling Ozone-Depleting Substances



Scientific evidence amassed over the past 25 years has shown that chlorofluorocarbons (CFCs), halons, hydrochlorofluorocarbons (HCFCs), methyl bromide, and other halogenated chemicals used around the world are destroying the stratospheric ozone layer. The Act provides for a phase-out of production and consumption of CFCs, HCFCs, and other ozone-depleting chemicals, and requires controls on various products containing ODSs.

The United States and 178 other countries are Parties to the Montreal Protocol as of July 31, 2001. The United States has repeatedly affirmed its commitment to this international treaty and to demonstrating world leadership by phasing out domestic production of ODSs, as well as helping other countries find suitable alternatives. As a signatory to the Montreal Protocol, the United States has an obligation to domestically regulate and enforce its terms. In accordance with this international treaty, and related Clean Air Act obligations, EPA implements and enforces rules controlling the production, import, and emission of ODSs, as well as rules requiring the EPA to identify safer alternatives and promote their use to curtail ozone depletion.

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[1] World Meteorological Organization, Scientific Assessment of Ozone Depletion: 1998, February 1999.

[2] Advisory Council on Clean Air Act Compliance Analysis, Science Advisory Board, The Benefits and Costs of the Clean Air Act 1990-2010, EPA report to Congress; 1999.

Because of the very long lifetimes of ODSs, even after program goals are met, the United States population will be exposed to higher levels of ultraviolet radiation than existed prior to the use and emission of ODSs. The ozone layer is not expected to recover until the mid-21st century at the earliest, according to current atmospheric research. Recognizing this and the current sun-exposure practices of the American public, EPA is encouraging behavioral changes with a goal of reducing UV-related health risks. The Agency is placing special emphasis on education and outreach to children, a particularly vulnerable population, through the SunWise School Program. Approximately 80 percent of lifetime exposure to UV rays is obtained prior to age 18.

Program Goals and Objectives for FY 2003 and Beyond

- Domestic and international phase-out of production and importation of numerous ODSs:
  - Implementation of a Class I chemical phase-out: chlorofluorocarbons (CFCs), halons, methyl chloroform, carbon tetrachloride, chlorobromomethane, and hydrobromofluorocarbons (HBFCs).
  - Development of a marketable allowance allocation program to ensure a graduated phase-out of HCFCs, leading to full phase-out in 2030, in compliance with the Montreal Protocol.
  - Implementation of a graduated phase-out of methyl bromide, while allowing for quarantine, pre-shipment, emergency, and critical uses – also employing marketable allowances.
  - Expanded monitoring and interception of illegal imports of ODSs, through collaboration with the U.S. Customs Service.
  - Implementation of an essential use allowance program for production and importation of CFCs and other ODSs needed for critical applications, such as metered-dose inhalers for asthma and other respiratory illnesses.
  - Increased recovery and recycling of ODSs and alternatives in the U.S. and abroad.
  - Regulatory review and outreach under the Significant New Alternatives Policy (SNAP) program to ensure that substitutes for ozone-depleting chemicals used across major industry and consumer sectors are safe for public health and the environment.
  - Expand the SunWise School Program, with the goal of reducing the risk to children and their caregivers of health effects caused by overexposure to UV radiation. Through implementation of this national UV education program targeted to grades K-8, EPA expects to reach children in 17,000 schools by 2005.
  - Environmental data development and public outreach aimed at informing the public of risks of overexposure to UV radiation.

- Facilitation of earlier voluntary phase-out and refrigerant recycling of CFCs and HCFCs in developing countries.

As noted above, current atmospheric modeling predicts a healing of the ozone layer by the middle of the 21st century, assuming full global compliance with the Montreal Protocol. Because the Protocol makes developing country compliance contingent on support from the Protocol's Multilateral Fund, continued support for the Montreal Protocol's Multilateral Fund is critical if we are to ensure protection of the ozone layer. Under the Montreal Protocol, the U.S. and other developed countries contribute to the Multilateral Fund to support projects and activities to eliminate the developing country production and use of ODSs. To date, the Fund has supported over 3,500 activities in over 124 countries that, when fully implemented, will annually prevent emissions of more than 150,000 metric tons of ODSs. In addition, the Fund has reached long-term agreements to dismantle over two-thirds of developing country CFC production capacity and virtually all of developing country halon production capacity. Final closure of related facilities depends on continued funding.

Pollution prevention also is an important element in meeting the objective goals. For example, the National Emission Reduction Program requires recovery and recycling or reclamation of ODSs, primarily in the air-conditioning and refrigeration sectors. The SNAP program will review newly developed alternatives to ODSs, and restrict those alternatives that, on an overall basis, are more harmful to human health and the environment than other alternatives for the same application. EPA, with the help of other Federal agencies, will also continue to facilitate the transition away from remaining uses of other ODSs, such as methyl bromide and HCFCs. Also working with other Federal and international agencies, EPA will continue its intensive efforts to curb illegal imports of ODSs.

Additionally, in FY 2003, EPA will continue to expand the SunWise School Program. The overarching goal of the SunWise Program is to create a comprehensive approach to mitigate the negative impacts associated with depletion of the Earth's protective ozone layer. EPA's SunWise School Program will achieve this goal through the direct education of children and caregivers in how to protect themselves and others from overexposure to UV radiation.

Program Accomplishments

- In FY 2001, consistent with the Montreal Protocol and the Act, EPA reduced methyl bromide production and import by 50 percent from the 1991 baseline. Simultaneously, EPA collaborated with the U.S. Department of Agriculture (USDA) and industry to test and register alternatives to methyl bromide in FY 2000 and FY 2001.

- Between FY 1995 and FY 2000, EPA, along with the Customs Service and Department of Justice, intercepted over 2,500,000 pounds of illegal ODS imports, resulting in more than 110 convictions of illegal importers. Stemming the flow of illegal imports into the U.S. not only ensures global reductions of ozone-depleting emissions, but also prevents undercutting the U.S. domestic market in reclaimed ODSs.

- During FY 1999 through FY 2001, EPA completed several major projects to prevent an increase in ozone-depleting emissions. For example, EPA:

- Conducted a comprehensive evaluation, in collaboration with the National Aeronautics and Space Administration (NASA), the academic community, and industry, of potential health impacts of ozone depletion resulting from high-speed aircraft flying in the stratosphere.

- Developed and published, with extensive industry input and review, a comprehensive halon recovery and reclamation guide, which focuses on environmentally sound and efficient training and testing uses, de-commissioning, recovery, reclamation, and disposal of halons and containers of halons.

- Banned the distribution and import into the U.S. of refrigerators containing CFCs. The amendment to the existing product ban ensures environmental protection from releases of CFCs and also avoids undermining U.S. refrigerator manufacturers, all of whom have moved to alternatives.

- During FY 2000 and FY 2001, EPA listed 31 of the new possible alternatives to ODSs as acceptable for use in refrigeration and air-conditioning, solvent cleaning, aerosols, insulating foams, fire protection, adhesives, coatings and inks, bringing the combined total of acceptable substitutes to approximately 400. EPA also restricted the use of several proposed substitutes to prevent unacceptable risks to the environment and consumer and worker health and safety.

- EPA also ensured the continued availability of CFCs used for metered-dose inhalers relied upon by 14 million patients with asthma and other chronic respiratory diseases.

- EPA's FY 2001 contribution to the Multilateral Fund helped the Fund support cost-effective projects designed to build capacity and eliminate ODS production and consumption in over 75 developing countries.

- During the 2000-2001 school year, the SunWise program grew from 140 participating schools in 36 states to 587 participating schools in 50 states, Puerto Rico, and the District of Columbia.

Annual Performance Goals and Measures

Restrict Domestic Consumption of Class II HCFCs

In 2003 Restrict domestic consumption of class II HCFCs below 9,960 ODP-weighted metric tonnes (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 10,000 ODP MTs

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

In 2001 The 2001 results will be available after March 15, 2002

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Domestic Consumption of Class II HCFCs	On track	<15,240	<9,960	ODP MTs
Domestic Exempted Production and Import of Newly Produced Class I CFC s and Halons	On track	<60,000	<10,000	ODP MTs

Baseline: The base of comparison for assessing progress on the 2003 annual performance goal is the domestic consumption cap of class II HCFCs as set by the Parties to the Montreal Protocol. Each Ozone Depleting Substance (ODS) is weighted based on the damage it does to the stratospheric ozone - this is its ozone-depletion potential (ODP) Beginning on January 1, 1996, the cap was set at the sum of 2 8 percent of the domestic ODP-weighted consumption of CFCs in 1989 plus the ODP-weighted level of HCFCs in 1989. Consumption equals production plus import minus export.

Montreal Protocol Fund

In 2003 Provide assistance to at least 60 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

In 2002 Provide assistance to at least 60 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol

In 2001 The US provided assistance to 76 developing countries to facilitate emissions reductions toward achieving the requirements of the Montreal Protocol.

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Assistance to Countries Working under Montreal Protocol	76	60	60	Countries

Baseline: In an average year the Multilateral Fund, created through the Protocol, approves projects to assist over 50 developing countries in their efforts to comply with the phaseout of ODSs

Validation and Verification of Performance Measures

Performance Measure: Reductions in production and importation of Ozone Depleting Substances (ODSs).

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

Data Source: Data are provided by producers, importers and exporters of ODSs. Some data are submitted as quarterly reports.

QA/QC Procedures: The Stratospheric Protection Program has a system in place to verify data from private external sources against data from the U.S. Customs. Additionally, the program has a three-point check of

data transcription from the reports into the tracking system.

Data Limitations: None

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

Coordination with Other Agencies

In an effort to curb the illegal importation of ODSs, an interagency task force was formed consisting of representatives from EPA, the Department of Justice, the Customs Service, the Department of State, the Department of Commerce, and the Internal Revenue Service. The venting of illegally imported chemicals has the potential to prevent the United States from meeting the goals of the Montreal Protocol to restore the ozone layer.

EPA is working with the USDA to facilitate research and development of alternatives to MBr, and to identify and monitor emergency and critical uses of MBr. EPA consults with the USDA in developing rulemakings for exempting certain MBr from production and importation phase-out. EPA also consults with the Food and Drug Administration (FDA) on the potential for MBr needs.

EPA works with the Office of the United States Trade Representative in analyzing potential trade implications in stratospheric protection regulations that affect imports and exports.

EPA works closely with the Centers for Disease Control and the National Weather Service on the UV Index and the health messages that accompany the scientific data. Additionally, EPA is a member of the Federal Council on Skin Cancer Prevention, which is dedicated to educating and protecting all Federal employees from the risks of overexposure to UV radiation.

EPA coordinates closely with the FDA to ensure that sufficient supplies of CFCs are available for the production of life-saving metered-dose inhalers for the treatment of asthma and other lung diseases. This partnership between EPA and FDA blends the critical goals of protecting the public health and limiting damage to the stratospheric ozone layer.

In addition to collecting its own UV data, EPA coordinates with NASA and the National Oceanic and Atmospheric Administration to monitor the state of the ozone layer.

EPA works with NASA on assessing essential uses and other exemptions for critical shuttle and rocket needs, as well as effects of direct emissions of high speed aircraft flying in the stratosphere.

EPA works very closely with the Department of State, and other Federal agencies as relevant to the issues at hand, in international negotiations among Parties to the Protocol.

EPA coordinates with the Small Business Administration to ensure that proposed rules are developed in accordance with the Small Business Regulatory Flexibility Act.

Statutory Authorities

Clean Air Act (CAA), Title V (42 U.S.C. 7661-7661f), and Title VI (42 U.S.C. 7671-7671q)

The Montreal Protocol on Substances that Deplete the Ozone Layer

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Reduction of Global and Cross-border Environmental Risks

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

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Protect Public Health and Ecosystems from PBTs and other Toxics.	**$4,772.6**	**$6,060.9**	**$6,173.6**	**$112.7**
Environmental Program & Management	$4,772 6	$6.060.9	$6,173.6	$112.7
Total Workyears	31.0	32.8	35.6	2.8

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Administrative Services	$16.1	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$0.0	$495.4	$515.9	$20.5
Global Toxics	$1,571.6	$1,522.8	$1,415.1	($107.7)
Global Trade Issues for Pesticides and Chemicals	$2,703 7	$3,091 2	$3,125.4	$34.2
Great Lakes	$0.0	$537.6	$0.0	($537.6)
Legal Services	$313.8	$382.4	$410.7	$28.3
Management Services and Stewardship	$0.0	$31 5	$26.2	($5.3)
POPs Implementation	$0.0	$0.0	$680.3	$680.3

FY 2003 Request

Many human health and environmental risks to the American public originate outside our borders. Many pollutants can travel easily across borders - via rivers, air and ocean currents, and migrating wildlife. Even in the remote Arctic, industrial chemicals such as polychlorinated biphenyls (PCBs) have been found in the tissues of local wildlife. Further, differences in public health standards can contribute to global pollution. A chemical of particular concern to one country may not be controlled or regulated in the same way by another. External environmental influences are not unique to the U.S. Harmonization of national standards can assist in reducing global pollution by increasing the number of health and ecological effects any single country may be examining; it may also lower barriers to trade and commerce as countries accept the validity of another's screening or other standards. To reduce pollution in the U.S., EPA is committed to helping reduce pollution globally.

EPA's activities under this objective give priority to selected chemicals and certain heavy metals which can persist, bioaccumulate and are toxic (PBTs). PBTs break down very slowly in the environment. For this reason, PBTs, including persistent organic pollutants, or POPs as they are known internationally, are very mobile, moving great distances along wind and ocean currents, thereby posing serious risks to human health and the ecosystems world-wide. PBTs also enter the food chain accumulating in shellfish, fish, birds and other animals that are exposed directly or indirectly through their diets.

EPA is working to reduce the potential risk from PBTs on several fronts: (1) reducing the release and transboundary movement of PBTs; (2) reducing the levels of exposure to humans and adverse effects to wildlife that may result from these PBTs; (3) assisting additional countries around the world to monitor releases and also manage their use of PBTs; and (4) increasing confidence that consistent PBT obligations will be met. For each of these efforts, the Agency targets the highest risk or greatest concerns first. Of the PBTs, PCBs, dioxins/furans, DDT and certain other pesticides, mercury poses the greatest concern. In each negotiated agreement or offer of technical assistance, these substances take priority. In addition, certain populations are especially vulnerable, and receive priority consideration. Examples include coastal populations with diets heavy in fish or marine mammals which may contain toxins and endangered wildlife which consume and biomagnify PCBs, DDT or other harmful PBTs.

International agreements form the vehicle for many protective standards. In 2003, EPA will continue to play a key role in the Administration's efforts to implement a number of regional and global instruments with both voluntary and legally binding obligations to control and more safely produce, use, store, and dispose of selected PBTs. In addition, the Agency will continue ongoing programs to build the capacity of other countries to reduce risks associated with PBTs, consistent with the obligations of international agreements already in place or now under negotiation.

Binding International Agreements on Certain Persistent Toxics and Prior Informed Consent

Recognizing that environmental loadings of PBTs and the resultant health and environmental risks will increase over time because of expanded production, trade, and use of these substances, in recent years international attention has focused on two groups of PBT substances: persistent organic pollutants (POPs) such as PCBs, dioxins and DDT, and selected heavy metals, most notably mercury.

Under the Global POPs Agreement, twelve chemicals are initially targeted for elimination and/or control:

1. DDT	7. Mirex
2. Aldrin	8. Toxaphene
3. Dieldrin	9. PCBs
4. Endrin	10. Hexachlorobenzene
5. Chlordane	11 Furans
6. Heptachlor	12. Dioxins

In December of 2000, the U.S. and 120 other nations concluded negotiations on a legally binding global convention on POPs under the auspices of the United Nations Environment Program (UNEP). The signing ceremony for the Stockholm Convention occurred in Stockholm, Sweden in May 2001, whereby the U.S. and 90 other countries and the European Union signed the treaty. Ninety-two countries must ratify the agreement for it to go into effect, but countries have already started to eliminate or decrease the use of the 12 chemicals identified. The Untied States is making legislative changes to both the Federal Insecticide, Fungicide, and Rodenticide Act and the Toxic Substances Control Act in order to fulfill its commitment under the new POPs agreement. EPA's goal is to have the Untied States ratify the agreement by September 2002.

The Arctic Cord Blood Program

An initial study indicates high levels of POPs contamination in newborns of native Alaskan's. Study will now be expanded to improve statistics and include a wider geographical area.

The Stockholm Convention bans or restricts manufacture, use, and/or release of 12 selected chemicals. The agreement also addresses export and import restrictions/controls, emission release restrictions, by-product issues, waste management, and the selection of additional substances for control. The long-term success of the agreement will depend in part on the development of release inventories and implementation of capacity building measures in developing countries around the world.

OIA in coordination with other EPA program and regional offices has developed an international POPs Implementation Plan. The goals of the plan are to (1) Reduction in amount of POPs reaching the U.S. by long range transport, (2) Reduction in the number of sources of POPs in countries of origin, focusing on: PCB-containing equipment, obsolete POPs stockpiles, and Dioxins and furans emissions from combustion sources, and (3)Enabling better inter- and intra-country coordination on POPs implementation activities by improving access to POPs technical, regulatory and program information on the Internet.

In FY 2003 EPA will expand its work to assist developing countries in meeting their obligations under this agreement. Because these chemicals circulate around the globe they can cause health problems anywhere including the United States. EPA will focus on those countries thought to be key sources of the substances most likely to impact the U.S., such as Russia, Central America and the Caribbean. The problem is especially acute in Alaska and the Great Lakes where POPs are taken up in the food chain and

impact Native Americans who depend on subsistence foods for their livelihood.

Among the heavy metals, mercury is especially noteworthy because it circulates in the environment at a global scale. International cooperation is needed in reducing mercury production, use, and release if substantial risk reductions to humans and their environment are to be achieved by individual countries. In FY 2003, EPA will provide technical expertise and data to the global mercury assessment. EPA also will expand the geographic reach of its mercury monitoring effort (e.g., by starting monitoring at Mauna Loa).

A legally binding global convention on Prior Informed Consent (PIC) – which facilitates voluntary information exchange and import controls of banned or severely restricted chemicals among countries – was signed in 1999. In FY 2003 EPA will determine what steps will be needed to ensure U.S. compliance. EPA also will assist developing countries in complying with the provisions of the PIC convention. This will result in more informed decision-making by these countries on how to best manage the risks posed by trade in restricted chemicals.

Other Risk Reduction Measures for Persistent Toxics

Projects aimed at protection of the Arctic Ecosystem will continue to focus on preventing and reducing environmental contamination from spent nuclear fuel, PCBs, and dioxins in NW Russia. In fiscal year 2003, the Russia PCB project will move into the third phase of selecting a PCB destruction technology and demonstrating this technology. The results of the Russia PCB inventory (phase 1) completed in 2000 found PCB inventories of 31,500 tons with the majority of the PCBs found in equipment (27,000 tons) still in circulation.

A program started in 2000 will continue to target countries in Sub-Saharan Africa (SSA) and specific sectors (i.e., refineries, mining companies, and stockpilers of agricultural chemicals) which are major contributors to globally circulating chemical/toxic risks, focusing on pesticides, mercury and lead. This program addresses the growing health and ecosystem risk from rapid urban and industrial development in SSA, and supports U.S. foreign policy and Presidential commitments of engagement with SSA through a community empowerment approach. In 2002, targeted countries and cities are being given information which will assist in implementing environmental regulatory systems on a par with U.S. and international standards. Key activities include pesticide information exchange and training, management of obsolete pesticide stockpiles, lead risk reduction, pollutant release and transfer register development, and industrial sector environmental improvement.

EPA is engaged with UNEP in an Internet Access Project to train officials of developing countries gain access to information necessary for the sound management of chemicals.

Harmonization of Test Guidelines

Test guidelines are collections of methods for assessing hazard, toxicity, or other properties of chemicals and chemical preparations, such as pesticides and industrial chemicals. Each test guideline provides instructions on how a specific type of test could be adequately performed. Many countries develop their own set of test guidelines in line with their internal legislative requirements and priorities, and differences in individual test guidelines can adversely impact the trade between countries.

Harmonizing test guidelines across countries offers significant benefits to industry, the public, and the environment, including:

1. reducing the burden on chemical companies and other industries, which otherwise must perform separate, sometimes only slightly different, repeated testing in order to satisfy the regulatory requirements of different jurisdictions both within the United States and internationally;

2. reducing the need for animal testing;

3. expanding the universe of toxic chemicals for which needed testing information is available; and

4. fostering efficiency in international information exchange and mutual international acceptance of chemical test data.

To date, EPA has published nearly one hundred guidelines, a third of which have been harmonized with OECD requirements. In 2003, the Agency will continue its involvement in the process for harmonization of additional test guidelines with the Organization for Economic Co-operation and Development (OECD) and expects to contribute to the harmonization of five additional test guidelines with the OECD. The achievement of the test guideline subobjective will lead to simplified and more uniform testing requirements, with guidelines that are acceptable to Federal agencies and a wide array of countries, including our major trading partners.

Development of Pollutant Release and Transfer Registries (PRTRs)

Pollutant Release and Transfer Registries (PRTRs) is the international term for annually-reported multi-media emissions inventories, which at a minimum include information on the releases (i.e., air, water, land, underground injection) and transfers (e.g., treatment) of pollutants from industrial sources. The Toxic Release Inventory (TRI) is the United States' version of a PRTR. International attention focused on PRTRs in 1992 when the Earth Summit (held in Rio de Janeiro) encouraged all nations to establish these systems as an integral role in the sound management of chemicals. In North America, all three North American Free Trade Agreement (NAFTA) nations, Canada, the United States and Mexico, have established emissions inventories. There are currently eight nations with PRTRs and more that are either in the process of developing them, or that have expressed an interest in developing such inventories. Fostering public awareness in other countries may help reduce pollution generated in those countries.

EPA remains involved at all levels of the PRTR effort. This involvement includes bilateral discussions and active participation internationally. EPA works closely with the OECD, the North American Commission for Environmental Cooperation (NACEC), the United Nations Institute for Training and Research (UNITAR), and the PRTR Coordination Workgroup, as well as in bilateral activities and in international fora. The U.S. EPA is chairing an OECD PRTR Release Estimation Techniques task force to leverage resources by sharing information and expertise on guidance to industry. To foster public education around the world, EPA will utilize available resources from the U.S.-Asia Environmental Partnership to provide financial or technical assistance to help nations develop PRTRs.

By 2005, EPA expects that a majority of OECD countries will have established PRTRs or will have PRTRs under development. Besides being used for community purposes, as TRI is currently used in this country, these registries will help monitor the progress countries make in complying with international agreements, such as the Montreal Protocol (ozone depleting chemicals), Basel (waste transfer agreements), and the POPs Treaty.

International Screening Information Data Set (SIDS)

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. Under OECD, high production volume chemicals are those that are manufactured or imported in quantities of at least two million pounds. 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 75-100 SIDS chemicals in 2003.

Bilateral Work with Canada and Mexico

EPA will continue to work with the Canadian Government to develop strategies for controlling and ultimately eliminating the remaining uses of two priority persistent bioaccumulative toxic pesticides, pentachlorophenol and lindane, and possibly others yet to be selected. Both chemicals are on the Great Lakes Binational Strategy. In coordination with Mexico, EPA will continue to promote the gradual phaseout of DDT and chlordane, largely through a gradual increase in the use of alternative products and integrated pest management practices. We are also engaged in trilateral work with Canada and Mexico in the framework of the working group on the Sound Management of Chemicals (SMOC).

FY 2003 Change from FY 2002 Enacted

EPM

- (+$400,000, +2.0 FTE) Additional funding will address priorities and provide technical assistance in key countries and regions, especially those whose POPs releases most directly affect the U.S.; and support international cooperative efforts, such as monitoring and assessment, to identify trends and establish priorities.

- (+$538,400) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Annual Performance Goals and Measures

Eval. Domest. Suitab. of Internal Consens. Testing

In 2003 Evaluate the domestic suitability of international consensus testing decisions made in the OECD International Screening Information Data Set (SIDS) program and obtain needed testing as required

In 2002 Evaluate the domestic suitability of international consensus testing decisions made in the OECD International Screening Information Data Set (SIDS) program and obtain needed testing as required

In 2001 The shortfall in the number of chemicals in this relatively young, voluntary program is due to a lack of commitments from industry, as well as debate within member countries on which chemicals should be brought forward

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Complete the review of testing needs for chemicals processed through the OECD- sponsored SIDS program	40	75	75	Test Reviews
Complete OECD harmonization	4	5		Test Guidelin
Prepare harmonization documents			5	Dft/Fnl Guidlns

Baseline (1)Complete testing and data on 25 chemicals processed through the OECD sponsored SIDS program in 1998 (2) Guideline harmonization baseline is 82 test guidelines (health, ecosystem, exposure, physical and chemicals properties) and 32 in draft (3)In addition to finalized guidelines (a) Drafts of New Guidelines and Guidance documents sent out for member country review, (b) Drafts of revised Existing Guidelines and Guidance documents that have been sent out for member country review are included.

POPs Negotiation

In 2003 Reduce environmental exposure to US and selected Countries of concern from Persistent Organic Pollutants (POPs) through the implementation of the Stockholm Convention on POPs

In 2002 Initiate priority activities, especially in developing countries, to implement the global convention on persistent organic pollutants (POPs)

In 2001 Three priority activities were initiated in developing countries to implement the newly concluded global convention on Persistent Organic Pollutants

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of POPs implementation activities supported	3	3		activities
Develop baseline information on atmospheric transport of POP chemicals to sensitive US ecosystems			1	station
Conduct source inventories in selected Asia-Pacific countries			4	inventories
50% of farmer-owned obsolete POP pesticide stockpiles are removed as a result of training, in priority countries and or regions in Central America			5	training
Assist countries in the Carribean to address targeted PCB sources			1	Mgmt Plan

Baseline With the signing of the global POPs convention in May 2001 EPA will work on domestic implementing legislation (e g., a FIFRA amendment) and projects to support implementation by key developing countries (e.g , China) In FY2001 EPA worked with UNEP to identify regions (e g , Sub-Saharan Africa, Central America, Southeast Asia) which would benefit from such support from EPA, and we have started projects on the basis of available funding. Whenever possible EPA will support projects which also promote compliance with the global Prior Informed Consent (PIC) regime and the international commitment to improve chemicals management capabilities, as set out in the Bahia Declaration from the Third Session of the Intergovernmental Forum on Chemical Safety in October 2000

Lead Gasoline Phase-Out

In 2003 An additional two countries make national commitments to phase out the use of lead in gasoline.

In 2002 An additional two countries make national commitments to phase out the use of lead in gasoline

In 2001 Target Met Philippines and Vietnam have committed to lead phase-out Also, EPA was an active player in achieving the "Declaration of Dakar,"

which is a statement by representatives of 25 Sub-Saharan African countries presenting a timeline for phasing lead additives out of gasoline

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of commitments to Pb phaseout	2	2	2	countries
Global reduction in Pb gasoline	10	10	10	percent

Baseline Fourteen countries have phased out the use of Pb gasoline. Twelve countries and the European Union are working on the phase out of Pb gasoline

Verification and Validation of Performance Measures

Validating measurements under international capacity-building programs presents several challenges. Technical assistance projects, for instance, typically target developing countries, which often do not have sound data collection and analysis systems in place. Several of the Agency's activities under Goal 6, Objective 4 will over time provide environmental information. Non-technical projects, such as assistance in gaining support from donor countries and organizations must rely on more subjective measures of change. Data verification and validation for each of the key measures under Objective 4 are discussed below.

FY 2003 Congressional Performance Measure: Develop baseline information on atmospheric transport of POP chemicals to sensitive US ecosystems.

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment tasks completed.

FY 2003 Congressional Performance Measure: Assist a target country in the Carribean to address targeted PCB sources.

Performance Database: None- Manual Collection
Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment tasks completed.

Coordination with Other Agencies

To conclude the international agreements on POPs, heavy metals and PIC substances, EPA must continue to coordinate with other Federal agencies and external stakeholders, such as Congressional staff, industry, and environmental groups, to convey the U.S. approach and solicit constructive criticism. EPA needs to ensure that the list of chemicals and the criteria and process for evaluating future chemicals for possible international controls are based on sound science. To illustrate, the Agency may typically coordinate with the Food and Drug Administration (FDA), FDA's National Toxicology Program, the Centers for Disease Control/Agency for Toxic Substances and Disease Registry (CDC/ATSDR), the National Institute of Environmental Health Sciences (NIEHS) and/or the Consumer Product Safety Commission (CPSC) on matters relating to OECD test guideline harmonization.

EPA's objective is to promote improved health and environmental protection, both domestically and worldwide. The success of this objective is dependent on successful coordination not only with other countries, but with various international organizations such as the Intergovernmental Forum on Chemical Safety (IFCS), the North American Commission on Environmental Cooperation (NACEC), the Organization for Economic Cooperation and Development (OECD), and the CODEX Alimentarius Commission. The North American Free Trade Agreement and cooperation with Canada and Mexico play an integral part in the harmonization of data requirements.

The Agency's goal to develop common or compatible international approaches to pesticide review, registration and standard-setting extends to our international partnerships. The partnerships may be grouped into 3 broad categories: (1) policy, (2) programmatic, and (3) capacity building. The Agency, for example, worked closely with other member countries of the OECD to establish a pesticide forum to bring government pesticide regulators together to address common problems and achieve greater harmonization of policies and procedures. The OECD Pesticide Forum works on five major areas: re-registration, data requirements, risk reduction, test guidelines and hazard assessment. The OECD plans to include establishing internationally harmonized labeling for pesticides.

EPA continues to participate actively in the implementation of the Food and Agriculture Organizations Prior Informed Consent (PIC) agreement, which promotes safe management of chemicals in international trade. PIC provides for notification from countries to the U. N. about pesticides and chemicals that have either been banned or severely restricted for health and/or safety reasons. The Agency is also continuing to work with the U.N. Food and Agriculture Organization (FAO) to promote safe management of chemicals in international trade. The Agency also has worked with the Codex Alimentarius Commission to improve the scientific basis and timeliness of Codex decisions, and boost public participation in the decision making processes. The Agency also will continue to work with the North American Commission for Environmental Cooperation on the development and implementation of regional action plans to address such PBTs as mercury.

EPA initiated work in 1999 on its Persistent Bioaccumulative Toxics Program (PBTP), which aims to support a variety of domestic and international efforts (noted above). The goal of these efforts is to reduce the risks posed by persistent toxic substances. Through the PBTP, EPA has worked closely with its domestic partners, including state and local governments, as well as industry, environmental and Tribal organizations, plus international counterparts, to promote the objectives of the Initiative. This work has closely paralleled many efforts already underway to conclude and promote the implementation of

international agreements on POPs and PIC.

At the EPA regional level, EPA also worked with the NACEC to deal with chemical pollutants of concern to Canada, Mexico, and the United States. The commission approved regional action plans to reduce the use of DDT and chlordane throughout North America.

Statutory Authorities

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

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3,4,5,6,10,11,18,20,23,24,25,30 and 31 (7 U.S.C. 136a, 126a-1, 126c, 136d, 136h, 136i, 136p, 136r, 136u, 136v, 136w, 136w-5 and 136w-6)

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 11023)

Toxic Substances Control Act (TSCA) sections 4, 5, 6, 12, and 13 (15 U.S.C. 2603, 2604, 2605, 2611, 2612)

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

Clean Air Act (CAA)

Federal Food, Drug and Cosmetic Act (FFDCA).

Resource Conservation and Recovery Act (RCRA)

North American Agreement on Environmental Cooperation (NAAEC)

1996 Habitat Agenda, paragraph 43bb

U.S./Canada Agreements on Arctic Cooperation

1989 US/USSR Agreement on Pollution

1991 U.S./Canada Air Quality Agreement

1978 U.S./Canada Great Lakes Water Quality Agreement
1909 Boundary Waters Agreement

World Trade Organization Agreements

North American Free Trade Agreement

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Reduction of Global and Cross-border Environmental Risks

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

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Increase Domestic and International Use of Cleaner and More Cost-Effective Technologies.	**$10,914.5**	**$12,520.9**	**$12,601.0**	**$80.1**
Environmental Program & Management	$10,914.5	$12,520 9	$12,601.0	$80.1
Total Workyears	53.9	54.0	54.7	0 7

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$16.1	$0.0	$0.0	$0 0
Commission for Environmental Cooperation - CEC	$3,269 0	$3,396.4	$3,535.3	$138.9
Environment and Trade	$1,700 0	$1,672.6	$1.844.3	$171.7
Facilities Infrastructure and Operations	$0 0	$815.6	$792.7	($22.9)
Global Toxics	$7.7	$0.0	$0.0	$0.0
International Safe Drinking Water	$384.4	$0.0	$0 0	$0.0
Legal Services	$581.4	$675.7	$725.6	$49.9
Management Services and Stewardship	$25.4	$51.0	$41.7	($9.3)
Regional and Global Environmental Policy Development	$1,784 8	$1,431 2	$1,331.3	($99.9)
Technical Cooperation with Industrial and Developing Countries	$3,400.2	$4,478.4	$4,330.1	($148.3)

FY 2003 Request

EPA's activities under this objective will: (1) protect human health and the environment on global, regional, and national levels by enhancing management capabilities in other countries; (2) reduce the cost of environmental protection in the U.S. through international sharing of environmental information and of innovative practices; (3) promote environmentally sound trade worldwide through the implementation of the North American Free Trade Agreement's environmental agreements, and through participation in the development of U.S. trade policy; (4) promote the dissemination of proven and cost-effective environmental technologies and services; and (5) advance U.S. foreign policy, economic, national security, humanitarian, and other interests abroad.

Specific programs and activities which support the objective during FY 2003 include:

Trade and Environment

EPA's involvement in U.S. trade policy development began in the early 1990's with the negotiation of the North American Free Trade Agreement (NAFTA) (1991-1993). For the first time, the United States, Mexico, and Canada placed priority attention on environmental issues caused by trade liberalization as part of trade negotiations. Increasingly, trade rules focus on "non-tariff trade barriers," which include safety and environmental laws that restrict market access, such as regulation of products (e.g., chemicals, pesticides, vehicles) that are sold or traded in commerce. In addition, some agreements (e.g., NAFTA) include investment provisions that limit the types of measures governments may apply to foreign investors, including measures to address health and environmental issues. Regulatory agencies must ensure that the implementation of domestic statutes does not violate U.S. trade obligations.

To better understand the linkages between trade rules and environmental protection, the United States has developed a procedure to assess reasonably foreseeable impacts of trade agreements both on the environment (both positive and negative), and on our ability to protect the environment through regulations. Coordinated by the Office of United States Trade Representative and the President's Council on Environmental Quality, U.S. Federal agencies conduct environmental reviews of major trade agreements. EPA and other Federal agencies are required to provide the human and financial resources necessary to perform such reviews. The environmental review of trade agreements includes an ongoing, iterative process in which EPA staff participate in developing US negotiating positions and in negotiating sessions to make sure that trade agreement proposals and environmental policies are mutually supportive, and not in conflict.

During FY 2001 and FY 2002, EPA was involved in conducting environmental reviews of proposed trade agreements with Jordan, Chile, Singapore, and the Free Trade Area of the Americas. That effort included developing numerical models to better predict the potential environmental effects of the agreements. During 2003, the number and pace of trade and investment agreement negotiations is expected to increase. EPA will continue to refine the models, and work with other U.S. Government agencies to perform additional reviews, including a review of the Agreement on Agriculture and the General Agreement on Trade in Services of the World Trade Organization.

Finally, in all of its trade agreements, the United States has been a proponent of making the trade dispute resolution process more open and transparent to the public. EPA has worked to articulate and promote this policy. Greater openness will improve public understanding of the dispute process which in

turn can help improve decision making and help assure that trade and environmental policies are not in conflict, but are mutually supportive.

International Safe Drinking Water

The international safe drinking water initiative will continue its focus on applying cleaner and more cost-effective environmental practices and technologies in order to improve drinking water quality in partner countries. Ongoing projects in Central America or Africa will be used as models to continue promoting water quality improvement throughout these regions with potential expansion into Asia. With the number of medium-sized cities (100,000 to 1 million inhabitants) and large cities (greater than 1 million inhabitants) expected to rise dramatically over the next 20 years, these projects will help alleviate the enormous stress on an already compromised water and wastewater infrastructure in urban and peri-urban areas.

In Latin American, EPA will work with partners such as the Pan American Health Organization's technical center – CEPIS – to strengthen their abilities to improve water quality in the region. EPA implemented several drinking water projects in Africa during FY 2002, with projects focused on nations in the southern and eastern parts of the continent. If sufficient funding is available for international drinking water programs during FY'03, EPA may expand on the work begun in Africa. Raising awareness of the cost-effectiveness of protecting safe water resources (versus treatment of contaminated sources) will be an important component of each project in each region. EPA will work with in-country partners to emphasize the health impacts and societal costs, such as infant mortality or lost work force productivity, which can result from unsafe drinking water.

Transfer of Innovative Practices and Environmental Information

EPA will continue its international urban environmental programs, which help U.S. cities and EPA's environmental programs to promote:

- sustainable social, economic, and environmental re-use of brownfields;
- environmentally-sensitive transportation systems which reduce greenhouse gas emissions and land consumption;
- "green" buildings which reduce greenhouse gas emissions, improve stormwater runoff, and reduce solid waste;
- sustainable urban watershed management; and
- integrated urban solid waste management systems.

The Agency supports this work through the exchange of urban and environmental policies, technologies and practitioners between U.S. and OECD-member urban regions, frequently at the sub-national level.

Continuing projects begun in FY 2002, EPA will support a comparative research study of urban watershed management in the Potomac River Basin using best practices from non-point runoff, storm water, land-use and urban development projects in Germany as the basis for the work. The project will highlight how urban regions in the Potomac Basin can improve surface water quality and simultaneously reduce water maintenance costs. EPA will also undertake a comparative risk-based decision-making effort between brownfields practitioners in Canada and the U.K. This effort will articulate the unique and common elements of risk-based approaches to site assessment, site restoration, and landscape design in these

countries and how these approaches could apply to the U.S. Finally, EPA will support the collection of international best practices "green" buildings in OECD-member countries and the dissemination of these practices to U.S. communities.

In addition to its international urban management activities. EPA will continue to work directly with other countries and through multilateral organizations to disseminate environmental information. However, because of reduced funds and FTEs, EPA will not initiate new international programs on the collection, analysis, or transfer of environmental data in FY 2003. Support for programs initiated in FY 2002, such as assisting Asian cities to improve collection and analysis of data on air pollution, will continue in 2003 as originally planned.

Legal and Regulatory Capacity Building

In FY 2003, EPA will continue legal and regulatory capacity-building activities in Asia and Central America. In Asia, EPA will continue to work in cooperation with U.S. AID to implement new environmental laws and regulations or significantly revise existing laws and regulations. Through in-country assistance to EPA counterpart organizations, training, and transfer of information, EPA will assist in developing and implementing improved laws and regulations. Projects in support of this effort will likely focus on transferring U.S. experience in the development of sound regulatory regimes and associated policies on permitting and penalty assessment. The Agency will also work to increase public participation in the promulgation of environmental regulations Public participation can encourage greater transparency in enforcement and reporting. EPA will also work with key partners to develop public awareness campaigns which facilitate the implementation of new regulations.

As part of an on-going cooperative effort with USAID, the Agency will also work to improve the regulatory framework in Central America. EPA will assist Central American countries in developing regionally-comparable environmental standards, improving their application and enforcement of environmental regulations, and increasing their ability to comply with international environmental agreements. Work under this regional program will focus largely on pesticide management, wastewater management systems, and municipal waste management. FY 2003 will mark the second year in this 6-year effort.

Work under Objective 5, *Achieve Cleaner and More Cost-Effective Practices*, provides developing countries with the tools and training necessary to achieve long-term environmental change. These programs complement technical assistance which EPA and other organizations provide by ensuring that the recipient country or region is able to sustain and replicate environmental improvements. These programs also help protect human health and the environment in the U.S. by introducing innovative practices for environmental management, reducing costs and encouraging information flow through data sharing, increasing the demand for U.S. environmental technologies and services, and helping to implement more transparent enforcement and permitting regimes.

Work in FY 2003 will focus on developing the frameworks necessary to perpetuate cleaner and more cost-effective practices. EPA will assist industrializing countries to improve legal and regulatory regimes (especially at the regional level) and to improve drinking water management systems. EPA will also work with other OECD-member countries to transfer to the U.S. their best practices for urban environmental management, thereby assisting municipal governments to explore cleaner, less expensive models of site

reuse, transportation planning, and the like.

FY 2003 Change from FY 2002

EPM

- (-$100,000, 2.0 FTE) redirection of resources to give greater emphasis to POPs implementation (Goal 6 Objective 4). The redirection will reduce the depth of analyses of some trade agreements in order to support priorities. In addition, to support the growing demand for additional coordination OIA will shift two FTEs within this objective to Trade and Environment program activities.

- ($789,600) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Annual Performance Goals and Measures

Enhance Institutional Capabilities

In 2003 Enhance environmental management and institutional capabilities in priority countries

In 2002 Enhance environmental management and institutional capabilities in priority countries

In 2001 Target Met. EPA conducted environmental institutional building and enhanced the abilities of the following countries to protect their environments and those of the global common El Salvador, Nicaragua, Honduras, Mexico, China, Thailand, Eygpt, Indonesia, Vietnam, & Philippines.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of countries or localities (3) that have adopted new or strengthened environmental laws and policies	3			countries
Number of organizations (3) that have increased environmental planning, analysis, and enforcement capabilities	3			organizations
Number of organizations (3) that have increased capabilities to generate and analyze environmental data and other information	3			organizations
Number of organizations (3) that have increased public outreach and participation	4			organizations
Number of targeted sectors (3) that have adopted cleaner production practices	2			industry sector
Number of cities (3) that have reduced mobile-source based ambient air pollution concentrations	3			cities
Assist in the development or implementation of improved environmental laws or regulations in priority countries		2	1	countries

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Increase the transfer of environmental best practices among the U S and its partner countries and build the capacity of developing countries to collect, analyze, or disseminate environmental data		3	3	countries
Increase the capacity of programs in Africa or Latin America to address safe drinking water quality issues			1	countries

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

World Trade Organization - Regulatory System

In 2003 All trade agreements negotiated after 2001 contain environmental provisions

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Trade agreements and world trade organization provisions contain environmental text			1	Agreements

Baseline Currently, the World Trade Organization has no formal policy for involving the public in its decision making and dispute resolution processes

Verification and Validation of Performance Measures

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

FY 2003 Congressional Performance Measure: Assist in the development or implementation of improved environmental laws or regulations in developing countries.

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment of: (1) tasks completed, (2) compliance with new regulation, and (3) progress toward project goals and objectives.

EPA works with developing countries to improve environmental laws and regulations. Tracking development and implementation of legislation presents few challenges because EPA project staff maintain close contact with their counterparts and any changes become part of a public record. Assessing the quality of the new or revised laws/regulations, the

level of public participation and support for stronger regulations, and the long-term social impacts of legislation is more subjective. Aside from feedback from Agency project staff, EPA relies, in part, on feedback from its counterparts in the target countries and regions and from NGOs and other third parties in gauging the efficacy of its work on international legal and regulatory capacity-building. Because EPA works to establish long-term relationships with priority countries, the Agency is often able to assess environmental improvement in these countries and regions for a number of years following legal assistance efforts. Under its cooperative programs with US AID in Central America, EPA is developing a set of indicators to measure progress for each activity undertaken. These indicators should be in place in FY 2002.

FY 2003 Congressional Performance Measure: Increase the transfer of environmental best practices among the U.S. and its partner countries and build the capacity of developing countries to collect, analyze or disseminate environmental data.

Performance Database: None- Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment of: (1) tasks completed, (2) compliance with new regulation, and (3) progress toward project goals and objectives. Data on the performance of specific urban projects are compiled and recorded by the grantee after consulting bi-monthly with local, regional, and national urban environmental practitioners. The data are forwarded to and verified in writing by the EPA project officer.

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

FY 2003 Congressional Performance Measure: Increase the capacity of programs in Latin America or Africa to address safe drinking water quality issues.

Performance Database: None-Manual Collection

Data Source: Project Specific

QA/QC Procedures: Verification does not involve any pollutant database analysis, but will require objective assessment of: (1) tasks completed, (2) compliance with new regulation, and (3) progress toward project goals and objectives. EPA is currently tracking output data for the International Safe Drinking Water Program (ISDWP) in Central America with plans to begin looking at measuring the longer term outcomes. On a quarterly basis, EPA collects data through EPA teams, in-country partners and cooperators on outputs such as number of people trained, number of pilot projects completed and number of workshops held. This information is validated through constant contact with the aforementioned groups and through on-site visits by EPA program managers. The

information is also shared with donors, specifically USAID, through quarterly reports. The outcome measures of improved capacity of in-country partners and stakeholders to ensure safe drinking water for the communities are under development and will provide indicators of the longer term sustainability potential of the program.

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

Coordination with Other Agencies

EPA's environmental mandate and expertise make it uniquely qualified to represent the nation's environmental interest aboard. While the Department of State (DOS) is responsible for the conduct of overall U.S. foreign policy, implementation is often the responsibility of other agencies with specific technical expertise and resources. Relations between EPA and DOS cut across several offices and/or bureaus in both organizations. EPA and the many components of the Department of Commerce work together closely on a range of different issues, including many science and technology issues. Within EPA, the Office of International Activities (OIA) is responsible in implementing EPA activities under the Export Enhancement Act of 1992. The Act mandated EPA participation on the Environmental Trade Working Group of the Trade Promotion Coordinating Committee, an interagency working group chaired by the Secretary of Commerce to coordinate the government's overall environmental trade promotion activities.

OIA also serves as the primary point-of-contact and liaison with the U.S. Agency for International Development (USAID). Specially drawing on expertise from throughout EPA, OIA administers a number of interagency agreements for environmental assistance.

EPA works extensively with the Office of the U.S. Trade Representative (USTR), particularly its Office of Environmental and Natural Resources, to ensure that U.S. trade polices are mutually supportive. For example, through the Agency's participation in the negotiation of both the North American Free Trade Agreement and the World Trade Organization and in the Committees created by both sets of agreement, EPA has worked with USTR to ensure that U.S. obligations under international trade agreements do not hamper the ability of Federal and state governments to maintain high levels of domestic environmental protection. The two agencies also work together to ensure that EPA's rules, regulations and programs are consistent with U.S. obligations under international trade agreements.

Finally, EPA works closely with a number of other Federal agencies with environmental, health, or safety mandates. These include the Department of Labor, Department of Transportation, Department of Agriculture, Department of Interior, Department of Health and Human Services, and the Food and Drug Administration.

Statutory Authorities

EPCRA section 313 (42 U.S.C. 11023)

PPA (42 U.S.C. 13101-13109)

World Trade Organization Agreements

North American Free Trade Agreement

North American Agreement on Environmental Cooperation

US-Canada Agreements

The Boundary Waters Treaty of 1909

1987 Great Lakes Water Quality Agreement

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

Goal 7: Quality Environmental Information VII-1
Increase Availability of Quality Health and Environmental Information VII-9
Provide Access to Tools for Using Environmental Information VII-20
Improve Agency Information Infrastructure and Security VII-31

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Quality Environmental Information

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Quality Environmental Information	**$180,067.6**	**$199,249.3**	**$199,124.0**	**($125.3)**
Increase Availability of Quality Health and Environmental Information	$80,122.2	$121,920.2	$120,414.7	($1,505.5)
Provide Access to Tools for Using Environmental Information.	$83,127.7	$53,515.0	$48,181.3	($5,333.7)
Improve Agency Information Infrastructure and Security.	$16,817.7	$23,814.1	$30,528.0	$6,713.9
Total Workyears	674.0	846.1	847.1	1.0

Background and Context

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

The importance of sound and reliable information technology was demonstrated following the events of September 11, 2001 and has crystallized the need to continually assess and secure our infrastructure to meet emerging security threats as well as emergency response needs.

Providing the American public and environmental decision makers at all levels of government with access to sound environmental information and involving the public in our work are essential parts of a comprehensive approach to protecting the environment.

This goal is premised on the concept that the U.S. public has a right to know about the pollutants in their environment, including land, air and water pollution, as well as potential health effects of the chemicals used in the food they consume. This premise is especially important to minority, low-income, and Native American communities that suffer a disproportionate share of health effects from poor environmental conditions.

Access to environmental information enables the American public and our governmental partners to make informed decisions about their environment. It also leads to creative and sustainable solutions to environmental problems, as well as opportunities for preventing pollution. The Agency believes that the U.S. public has the right to information to improve public policy and environmental decision-making.

Means and Strategy

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

First, EPA will continue to increase the availability of health and environmental information by providing citizens with access to accurate and reliable environmental information. For instance, with the final expansion of *Window To My Environment* - a geographic portal to community-based environmental information - EPA is moving forward on its mandate to provide the public with electronic and non-electronic access to accurate, useful, and reliable environmental data. This data source will include information collected by EPA, our partners, and stakeholders.

Effectively managing the process by which the public is educated and informed regarding the Agency's resources is pivotal to accomplishing the mission of the Agency. EPA, through its public and congressional liaison functions, Federal Advisory Committee Act (FACA) functions, media relations, print and web content review and oversight responsibilities, will implement strategies designed to continually inform and educate all segments of the public about Agency initiatives, policies, regulations, services and environmental information resources, and will develop and monitor feedback mechanisms to learn from them.

Second, EPA will continue to develop the Exchange Network (formally known as the National Environmental Information Exchange Network). The Exchange Network is a comprehensive, integrated information exchange system designed to facilitate information sharing among EPA, the states, other Federal agencies, Tribes, localities, and the regulated community. This will include standardized data formats and definitions, a centralized approach to receiving and distributing information, and improved access to timely and reliable environmental information. The Exchange Network will improve environmental decision making, improve data quality and accuracy, ensure security of sensitive data, avoid data redundancy, and reduce the burden on those who provide and those who access information.

Third, EPA will develop and implement program policies and guidance in several areas including web content, website management, and privacy.

Fourth, the Agency will solicit customer feedback to systematically improve information usability, clarity, accuracy, reliability, and scientific soundness. EPA will develop and implement necessary data standards and associated registries to improve the consistency, quality, and comparability of data managed in national environmental systems. EPA will ensure that data quality is known and appropriate for intended uses. Usability testing and customer satisfaction baselines will assure that the information the Agency provides is meeting the needs of its stakeholders. In addition, the Agency is committed to developing analytical and other tools to help users interpret and apply environmental data .

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

Sixth, EPA will streamline information collection, making it more efficient and cost-effective The Agency will examine the information reporting burdens we have placed on our partners and on the regulated community and ensure that information collections address specific needs.

Seventh, EPA will improve the timeliness and completeness of requests for information, by implementing an Agency-wide electronic records and document management system. The Agency plans to develop and acquire the necessary software and hardware to begin phased implementation of the system throughout the Agency.

Finally, strengthening and securing its information infrastructure is fundamental to increasing the availability, usability, and reliability of environmental information. EPA must remain vigilant in maintaining a strong and secure information infrastructure that directly supports the mission of the Agency and homeland security.

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

Research

Research efforts supporting this goal include the Integrated Risk Information System (IRIS) and the Risk Assessment Forum (RAF). IRIS is an EPA database of Agency consensus health information on environmental contaminants. The database is used extensively by EPA, the states, and the general public to access consistent, reliable toxicity information needed for credible risk assessments. In FY 2003, the Agency will develop new and updated Agency consensus human health assessments of environmental substances of high priority to EPA and make them publicly available on IRIS. The RAF promotes Agency-wide consensus on difficult and controversial risk assessment issues and ensures that this consensus is incorporated into appropriate Agency risk assessment guidance.

Strategic Objectives and FY 2003 Annual Performance Goals

Increase Availability of Quality Health and Environmental Information

- Decision makers have access to the environmental data that EPA collects and manages to make sound environmental decisions while minimizing the reporting burden on data providers.

- The public will have better information on toxic releases and wastes being managed in their communities. EPA will also work with the owners and operators of facilities to reduce the record-keeping and reporting burdens associated with submitting their TRI forms to EPA by 14%.

Provide Access to Tools for Using Environmental Information

- Ensure that EPA's policies, programs and activities address disproportionately exposed and under-represented population issues so that no segment suffers disproportionately from adverse health and environmental effects.

- The public will have access to a wide range of Federal, state, and local information about local environmental conditions and features in an area of their choice.

Improve Agency Information Infrastructure and Security

- OMB reports that all EPA information systems meet/exceed established standards for security.

Highlights

Recent changes in information technology, combined with a dramatic increase in public demand for information, have fundamentally altered the way the Agency and the states collect, manage, analyze, use, secure, and provide access to environmental information. EPA is working with the states and Tribes to strengthen our information quality, leverage information maintained by other government organizations, and develop new tools that provide decision-makers and citizens with simultaneous access to multiple data sets and information products thereby allowing users to understand local, state, Regional, and national environmental conditions. These improvements support better-informed environmental decision-making and management based on environmental results.

These improvements will enable citizens to get answers to the questions they have about what EPA is doing to protect the environment and the health of their communities. Stakeholders will have "one-stop" access to the regulatory and policy implementation guidance that they need to improve the performance of their facilities and sectors. The environmental justice (EJ) community will have improved and increased access to the data and information they need to hold facilities' and local government managers environmentally accountable. Facility operators will be able to submit their data to states, Regions and Federal systems simultaneously via the Internet without having to fill out paper forms, an improvement which will help EPA to meet the

national Paperwork Reduction Act and the Government Paperwork Elimination Act burden reduction goals.

The Agency will actively participate in several of the Administration's electronic government (e-gov) initiatives, building on efforts started in 2002. E-Gov is a major component of the President's Management Agenda and will spur government-wide service improvements and efficiencies. EPA's work will include online rule-making (e-dockets), electronic dockets management, and participation in the human resources and financial management improvement projects.

The Agency's environmental justice program will help communities access information to ensure that they do not experience a disproportionate amount of pollution. Since 1994, more than 950 grants have been awarded to community organizations. As a result of these grant awards, community-based organizations (i.e., grassroots groups, churches, and other nonprofit organizations) have expanded citizen involvement and given residents the tools to learn more about exposure to environmental harms and about associated risks and to protect their families and their communities. These small grants have served as the "seed-money" for empowerment of the residents of these communities, allowing them to speak for themselves and make their own decisions. In 2003, the program will continue to assist community-based organizations through the community small grants program.

Key to achieving our objectives will be the further development of the Exchange Network. The Network builds on a strengthened partnership between EPA and the states. It uses an internet-based, multi-media approach to environmental information exchange that is standards-based, highly connected, flexible, and secure. The Exchange Network will provide a wide range of shared environmental information to the states, Tribes, localities, regulated community, EPA, and the public. Additionally, through the information grant program, begun in 2002, states and Tribes will be better positioned to participate in the Exchange Network.

The Central Data Exchange (CDX) is the electronic portal through which information is securely received, translated and forwarded data to EPA's data systems. In 2003, the CDX infrastructure, a key component of the Exchange Network, will service 35 state and a total of 25,000 facilities, companies and laboratories will use it to provide data to EPA electronically. By widely implementing an electronic reporting infrastructure, CDX will reduce reliance on less efficient paper-based processes, resulting in improved data quality, reduced reporting burden and the creation of new opportunities for simplifying the reporting process. By the end of 2003, electronic reporting through CDX will be possible for all of the national environmental systems.

In 2003, data standards will be expanded to include additional areas of environmental information. Access to related information for use by EPA's partners and stakeholders will be greatly enhanced by improvements to the Environmental Data Registries. This system of registries will continue to provide the technical detail needed to promote the adoption of data standards by other parties, and will also provide authoritative sources for populating records, thereby promoting data sharing and integration.

Users of EPA's website have a tool for notifying the Agency of potential errors they find in the national environmental data systems. The error correction program is the first step in an internal process by which the Agency or a state will assess all reported potential errors, and notify the individual who reported the error of the findings and corrective actions. This program will continue to operate in 2003 and will serve as the basis for the data and information quality "complaint resolution process" called for in the Office of Management and Budget's recently-published quality guidelines.

Citizens and the regulated community will have greater online access to information contained in EPA's rule-making dockets. The Regulatory Public Access System will be the internet complement to EPA's combined docket facility, and will be first available in mid-2002 and more fully populated in 2003. This effort is part of the Administration's e-government initiative.

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

In 2003, the Agency will continue its efforts to promote public access through the Agency's Access to Interpretative Documents project (formally known as Enhanced Public Access). This project is designed to make all significant Agency guidance, policy statements, and site-specific interpretations of regulated entities' environmental management practices electronically available to the states, industry, and the public in a secure manner.

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

In 2003, EPA will continue to reduce TRI reporting burdens on industry and improve TRI data quality by distributing its new software tool, "TRI Made-Easy (TRI-ME)." EPA expects to further increase the percentage of TRI reporting forms that are submitted in digital format. EPA will continue to refine and expand the public's understanding of TRI data by improving data access tools such as the "TRI Explorer." In 2003, EPA will release data for the first reporting year since the Agency lowered the TRI reporting thresholds for lead and lead compounds in 2001. EPA will also be issuing a rule to transition from using the old industry classification system, the Standard Industrial Code (SIC) system, to the new classification system, the North American Industry Classification System (NAICs) for TRI reporting. As part of its on-going responsibilities under the Emergency Planning and Community Right-to-Know Act (EPCRA), EPA will continue to respond to petitions to add and delete chemicals on the TRI list and to other petitions to amend the program.

In 2003, the Agency will continue to modernize its information systems in cooperation with the states. Modernization efforts will focus on data integration and data quality. These projects will be planned and managed under the Clinger-Cohen Act investment review with oversight by EPA management.

EPA's information technology program will maintain its commitment to strong customer service and strategic investment in new technology to ensure our continued ability to deliver information services efficiently, effectively, and securely. Through emphasis on acquiring the right skills, technologies, and services, EPA will take additional steps to strengthen and secure the Agency's information technology infrastructure. In 2003, EPA will implement a program to ensure that all of its central infrastructure, financial and mission critical environmental systems are assessed for potential security risks as part of regular system security plan updating.

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

Research

In FY 2003, the Agency will continue to provide technical guidance for conducting risk assessments to improve the scientific basis for decision making. To achieve this goal, the Agency's Risk Assessment Forum will focus in three areas: cumulative risk assessment, ecological risk assessment, and risk assessments for children. Efforts will result in technical guidance on the identification of appropriate age groupings for exposure assessments for children, technical issue papers, and a framework for preparing cumulative risk assessments. EPA will also collect, manage, and present environmental information for the benefit of the Agency and the public in order to enhance the availability and utility of data, information, and tools for decision making. To that end, the Agency will develop and/or update Agency consensus human health assessments for 8-10 environmental substances of high priority to EPA and make them publicly available on Integrated Risk Information System (IRIS).

External Factors

EPA's information comes from many sources, including states, Tribes, local governments, research, and industry. Working in partnership with state and Tribal governments is an essential element of our information programs. Seeking advice and input from the regulated community and the public will ground our information programs and approaches and make them more responsive to stakeholders' needs. In order to achieve an integrated information network that increases efficiency and fosters information sharing, we must work with those who provide and use EPA's information to ensure that data are maintained effectively, and protected appropriately.

To be efficient and cost-effective, EPA's information systems and technologic infrastructure must be flexible enough to respond to changes and take advantage of innovations

in technology. To reduce our vulnerabilities and ensure that we can meet current and future information needs, EPA's systems and technology infrastructure must keep pace with advances in available technology.

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Quality Environmental Information

Objective: Increase Availability of Quality Health and Environmental Information.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Increase Availability of Quality Health and Environmental Information.	**$80,122.2**	**$121,920.2**	**$120,414.7**	**($1,505.5)**
Environmental Program & Management	$75,761.5	$94,690.7	$93,749 7	($941.0)
Hazardous Substance Superfund	$647.6	$2,229.5	$1.665 0	($564.5)
Science & Technology	$3,713 1	$0.0	$0.0	$0 0
State and Tribal Assistance Grants	$0.0	$25,000 0	$25,000.0	$0 0
Total Workyears	462.1	478.2	492.1	13 9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Administrative Services	$307.6	$0.0	$0.0	$0.0
Community Assistance	$3,618.0	$650.2	$921.8	$271.6
Congressional Projects	$1,979.2	$2,078.6	$1,991.3	($87.3)
Congressional/Legislative Analysis	$4,357.6	$4,852 2	$4,857.8	$5 6
Congressionally Mandated Projects	$2,011.4	$1,100 0	$0.0	($1,100.0)
Correspondence Coordination	$2,658.6	$1,200 7	$1,096.3	($104.4)
Data Collection	$3,614.0	$0 0	$0.0	$0.0
Data Management	$2,463.7	$2,400 7	$2,630.1	$229.4
Data Standards	$3,753.8	$500.0	$2,785.4	$2,285.4
Direct Public Information and Assistance	$10,431.0	$8,612.7	$8,998.4	$385.7
Environmental Education Division	$9,003.4	$9,160 2	$0.0	($9,160.2)
Executive Support	$83.6	$0.0	$83.6	$83.6
Facilities Infrastructure and Operations	$6,903.7	$7,002 0	$7,031.5	$29.5
GLOBE	$997 8	$0 0	$0.0	$0.0
Geospatial	$0 0	$154 8	$464.0	$309.2
Homeland Security	$0.0	$600 8	$473.3	($127.5)
Information Exchange Network	$0.0	$25,000.0	$25,000.0	$0 0
Information Integration	$3,719.8	$4 675.8	$9,728.5	$5,052.7

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Information Technology Management	$3,525.3	$3,872 9	$3,000.0	($872.9)
Intergovernmental Relations - OA	$1,263.4	$1,519.8	$1,835.4	$315.6
Legal Services	$1,730 3	$1,979.1	$2,082.7	$103.6
Management Services and Stewardship	$365 3	$1,410 8	$1,314 9	($95 9)
Multi Media Communications	$0 0	$821.3	$870.3	$49.0
NACEPT Support	$1,560 6	$1,803.1	$1,670 1	($133.0)
NAFTA Implementation	$403.3	$514.3	$747 9	$233.6
National Association Liaison	$235 5	$346.0	$262 5	($83.5)
Pesticide Registration	$196 2	$570.6	$221 4	($349 2)
Pesticide Reregistration	$194.9	$392.2	$198 1	($194 1)
Public Access	$2,724.5	$4,857.5	$5,165 2	$307 7
Regional Management	$1,630.6	$1,262.2	$1,267 8	$5 6
Regional Operations and Liaison	$428.3	$547.5	$477 6	($69 9)
Regulatory Development	$4,629.5	$5,000.5	$4,817.4	($183.1)
Reinventing Environmental Information (REI)	$0.0	$5,066.8	$4,279 1	($787.7)
SBREFA	$571 9	$686 2	$608.8	($77.4)
Small, Minority, Women-Owned Business Assistance	$2,048.2	$2,295.5	$3,305 0	$1,009.5
System Modernization	$7,168.6	$6,827 7	$7,254 6	$426.9
Toxic Release Inventory / Right-to-Know (RtK)	$14,105.6	$13,278.0	$14,206 9	$928 9
Web Products Quality Control	$0.0	$879.5	$767 0	($112 5)

FY 2003 Request

EPA will continue to manage and support its website - EPA.Gov- to ensure public access to a broad range of resources, applications, maps, tools and databases. The EPA.Gov website has grown exponentially in the last five years, with web site hits rising from monthly averages of 9.7 -million in 1997 to 122 -million in of October 2001. The Agency will continue to expand the capabilities of the Envirofacts database to provide comprehensive environmental information to Federal agencies, environmental interest groups, the regulated community, state and local communities, Tribal governments, and the general public.

EPA will actively participate in several of the Administration's electronic government (e-gov) initiatives, building on efforts started in 2002. E-Gov is a major component of the President's Management Agenda and will spur government-wide service improvements and efficiencies. EPA's work will include online rule-making (e-dockets), electronic dockets management, and participation in the human resources and financial management improvement projects.

Key to achieving improved information quality will be further development of the Exchange Network. The Network is a comprehensive, integrated information exchange network that is being designed to facilitate information sharing among EPA and its partners using standardized data formats and definitions, a centralized approached to receiving and distributing information. The Exchange Network will fundamentally change the way the Agency and the

states do business and will improve data accuracy, reduce burden, and improve the utility of environmental information for decision making at all levels.

In 2003, EPA will continue its environmental information grant program to promote state and Tribal participation in the Exchange Network. This grant program builds on work underway in several states and assists states and Tribes in evaluating their readiness to participate in the Exchange Network, enhances their efforts to complete necessary changes to their information management systems to facilitate Exchange Network participation and supports state information integration efforts. In 2003, the Agency will increase the number of EPA systems receiving data electronically via the network, accelerate the development and use of common data exchange formats and data standards, refine the Agency's technical architecture, begin to implement a system of access, develop environmental indicators, and enhance efforts to integrate and use geospatial information.

In 2003, the CDX will be firmly established as EPA's enterprise-wide electronic reporting gateway to the Agency's information network. The CDX will have the capability to accept and translate different data transmission formats used by states, facilities, and laboratories. The CDX will be a model of e-government by providing the capability to electronically sign and file reports from the regulated community.

As mandated by Section 313 of EPCRA and Section 6607 of the PPA, EPA annually collects information on listed toxic chemicals from certain industries and make the information available to the public through various means, including a publicly accessible national database. In 2003, EPA will continue to reduce TRI reporting burdens on industry and improve TRI data quality by distributing its new software tool, TRI-ME. EPA also expects to increase the percentage of TRI reporting forms that are submitted in digital format (electronically and via floppy disc).

EPA will continue to refine and expand the public's understanding of the TRI data by improving data access tools such as the ATRI Explorer.@ In 2003, EPA will release data for the first reporting year since the Agency lowered the TRI reporting thresholds for lead and lead compounds in 2001. EPA will also be issuing a rule to transition from using the old industry classification system, the SIC system, to the new classification system, the NAICs, for TRI reporting. As part of its on-going responsibilities under the EPCRA, EPA will continue to respond to petitions to add and delete chemicals on the TRI list, and to other petitions to amend the program.

Making information accessible to the public is a primary component of an effective strategy to expand the public's right-to-know. The environment in which the pesticides program operates is constantly changing. New pesticide active ingredients are developed for registration; new uses are proposed; new standards (as with Food Quality Protection Act (FQPA) are applied to old pesticides; and new information is received about pesticides and their impact on the environment. Because pesticides affect everyone, it is especially important that citizens have accessible, comprehensive and useful information about their effects and uses.

The Agency will utilize the National Advisory Council on Environmental Policy and Technology (NACEPT) and its standing committees, facilitate and monitor the Agency's response to NACEPT recommendations, and manage statutorily-mandated advisory committees dealing with implementation of the environmental side accords to the North American Free Trade Agreement (NAFTA) and with environmental and infrastructure issues along the U.S./Mexico border. The respective committees are: the Good Neighbor Environmental Board and the National and Governmental Advisory Committees. Through these stakeholder committees, EPA receives broad advice as national and international environmental policy is developed and implemented. This is accomplished mainly by ensuring staff support and executing efficient and effective operation of EPA advisory committees. EPA has recently concentrated on enhancing the Agency's ability to use stakeholder processes, and its Federal advisory capacity has improved vastly to enhance EPA's environmental decision making.

The regulatory development process ensures the Agency's compliance with various statutes and Executive Orders. Through improved and streamlined regulatory processes that include increased public information, EPA is committed to providing quality information to stakeholders. EPA has also been a leader in the Federal government in the use of consensus building techniques to assist in the area of regulatory development. EPA will continue to develop negotiated rulemakings, policy dialogues and other consensus-based stakeholder involvement techniques at the national, Regional, local and international levels. Involvement of stakeholders in crafting the programs and rules by which they will abide promotes innovative, effective and cost effective solutions and fosters earlier, more complete compliance with environmental protection measures.

In 2003, the Agency will continue to advance this objective by ensuring that EPA rulemakings adhere to all applicable statutory and executive requirements, and achieve environmental results with minimum burden on the public. The Agency will continue to expand outreach to small entities such as small businesses, governments and non-profits, and will establish formal mechanisms and build partnerships to advocate small entity involvement in Agency rulemakings. EPA will complete Regulatory Flexibility analyses for all rulemakings that may have significant impacts on a substantial number of small entities and initiate a small communities outreach program to gather information on impacts of EPA rules on these communities.

In support of this objective, the Office of Congressional and Intergovernmental Relations (OCIR) responds to congressional requests for information, written and oral testimony, briefings, and briefing materials. It ensures that Congress receives the information needed to make policy and program decisions on environmental and public health issues. In addition to working with Congress, OCIR works closely with the Agency's program offices to keep them informed of current activities that affect their particular subject areas. OCIR develops legislative strategies to support the program offices and coordinates Agency appearances before congressional committees, as well as responses to congressional transcripts and Q&A's.

OCIR also serves as the Agency's primary point of contact for national associations and other groups representing state and local governments and for individual states and local governments on environmental issues, programs and initiatives. It ensures that these groups

receive the information needed to make decisions on environmental and public health issues, and have an appropriate level EPA person available to participate in meetings or assemblies. This office works closely with the Agency's program offices to keep them informed of current activities at the local level and of any policies the local governments and national associations may be advocating that affect a particular program office's subject area. OCIR also supports the Local Government Advisory Committee and the Small Town Advisory Subcommittee.

As the lead for liaison with state and local agencies, OCIR provides regular, timely communications by preparing the Agency's leadership to effectively address priority issues and develop appropriate responses. It works with states and state associations to ensure that state concerns are considered in Agency policies, guidance, and regulations. Additionally, OCIR functions as the lead on state issues relating to the National Environmental Performance Partnerships System.

The Office of the Executive Secretariat (OEX) logs, assigns, and tracks correspondence received by the Administrator and Deputy Administrator to help ensure that citizens' comments, questions, ideas and concerns are directed to the appropriate program and/or regional offices for informed response, for inclusion in official public comment files, and/or for other necessary action. OEX also assists in the quality control of executive responses.

The Agency's Office of Small and Disadvantaged Business Utilization (OSDBU) provides 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.102-389, the Agency has a national goal of 8% utilization of minority and women-owned businesses in the total value of Agency procurement and financial assistance agreements. This activity enhances the ability of small, minority and women-owned businesses to participate in the Agency's objective to protect public health and the environment.

The Office of Communications, Education, and Media Relations (OCEMR) will use diverse media resources to aid public understanding of science in order to increase public awareness and enhance public perception of environmental issues and their technological and scientific solutions. The Office will inform the public about environmental problems and goals, and strengthen communications by integrating the policy-regulatory decisions and communications messages. OCEMR, and its Regional counterparts, will provide a leadership role in managing the EPA homepage, web site, and web product review for all EPA offices, programs and Regions. It will also edit EPA's web content and work with the Office of Environmental Information to put this information on the EPA website, manage EPA's Press Release Database and the Administrator's Speech Database, and design the Newsroom Web page for the Office of Media Relations. OCEMR will work with the Administrator to keep Agency staff and the public informed about major policy decisions, initiatives, events and key personnel appointments. The Office will also be responsible for the electronic distribution of mass mail information for the Administrator and her designees.

The Agency plans to accelerate efforts by the compliance and enforcement program to promote public access during 2003. The program will continue to support data integration projects, such as Integrated Data for Enforcement Analysis (IDEA) which makes integrated compliance data from several media-specific data bases available nationally in an interactive online mode. The enforcement and compliance assurance program will continue to work to increase states use of IDEA by demonstrating its analytical capabilities to support targeting and screening based on risk and other compliance concerns.

The compliance and enforcement program will continue to contribute to the Agency-wide Enhanced Public Access Project, intended to make all significant Agency guidance, policy statements and site-specific interpretations of the regulated entities' environmental management practices electronically accessible to the Regions, states, industry and the public.

FY 2003 Change from FY 2002 Enacted

EPM

- (+$3,365,200) Provides support for the Agency to build the Information Exchange Network infrastructure needed to meet the needs of the states and our other data partners.
- (-$6,735,900) This decrease reflects the transfer of the Environmental Education program to the National Science Foundation's math and science programs.
- (-$2,424,800) This decrease reflects the transfer of the Environmental Education program's workyears in Headquarters and the Regions to the Office of Children's Health Protection, the Office of Cooperative Environmental Management, the Office of Congressional and Intergovernmental Relations and regional work in support of the Agency's small and disadvantaged business utilization commitments.
- (+$1,009,500) This increase reflects increased support for the Agency's goals.

EPM

- (+$2,000,000) Provides EPA funding for E-Government activities in support of the President's Management.

S&T

- (-$1,300,000) The FY 2003 request is $4,875,000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request

EPM

- (+$7,634,800) Provides support for the Agency to build the Information Exchange Network infrastructure needed to meet the needs of the states and our other data partners.
- (-1,028,400) The Emergency Supplemental Appropriation for Homeland Security efforts was not requested in FY 2003

Superfund

- (+$3,000.000) Provides support for the Agency to build the Information Exchange Network infrastructure needed to meet the needs of the states and our other data partners.
- (-900.000) The Emergency Supplemental Appropriation for Homeland Security efforts was not requested in FY 2003

Annual Performance Goals and Measures

Process and Disseminate TRI Information - OEI

In 2003	The public will have better information on toxic releases and wastes being managed in their communities EPA will also work with the owners and operators of facilities to reduce the record-keeping and reporting burdens associated with submitting their TRI forms to EPA by 14%
In 2002	EPA will reduce reporting burden, improve data quality, lower program costs and speed data publication by increasing the amount of TRI electronic reporting from 70 to 85 percent
In 2001	120 000 chemical submissions and revisions processed, published annual summary of TRIS database in April 2001, and TRI Public Data Release published in April 2001.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Total electronic reporting of all chemical submissions processed (Includes diskette submissions created by ATRS TRI-ME, and other reporting software programs as well as web-based submissions)		85		Percent
TRI Public Data Release	Published			Published
Chemical submissions and revisions processed.	120.000			Forms
TRIS database complete and report issued	Published			Published
Data quality keep data entry error rate below 1% per form				Error Rate
Increase magnetic media use for TRI reporting				Magnetic Me
The number of forms containing Toxic Release Inventory data being reported electronically on computer diskettes will increase from 85% to 90%			90	Percent

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

Enhanced Public Access

In 2003	Improve public access to compliance and enforcement documents and data through multimedia data integration projects and other studies, analyses and communication/outreach activities
In 2002	Improve public access to compliance and enforcement documents and data through multimedia data integration projects and other studies, analyses and communication/outreach activities.
In 2001	EPA improved public assess to compliance but in areas covered by the performance measures EPA did not meet targets

Performance Measures	FY 2001	FY 2002	FY 2003

	Actual	Enacted	Request	
By the end of FY 2001 all ten EPA Regions will have an enforcement and compliance web-site	9			Websites
Make 90% of enforcement and compliance policies and guidances issued this FY available on the Internet within 30 days of issuance	86	90	90	Percent
By April 2001, make summaries of all significant cases available on the Internet	50			Percent

Baseline OECA enhances public access to compliance and enforcement documents through our efforts to make available through the internet newly issued enforcement and compliance documents

Information Exchange Network

In 2003 Decision makers have access to the environmental data that EPA collects and manages to make sound environmental decisions while minimizing the reporting burden on data providers

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
States using the Central Data Exchange to send data to EPA		15		States
The number of states using the Central Data Exchange will increase to 45 as the means by which they submit data			45	States
Implement four data standards in 13 major systems and develop four additional standards in 2003			4	Data Standard

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

Verification and Validation of Performance Measures

Performance Measure: The number of states using the Central Data Exchange will increase to 45 as the means by which they submit data.
Performance Database: CDX Customer Registration Subsystem.
Data Source: Data are provided by state CDX users.
QA/QC Procedures: QA/QC is performed in accordance with a CDX Quality Assurance Plan. Specifically, data are reviewed for authenticity and integrity. Automated edit checking routines are performed in accordance with program specifications and a CDX quality assurance guidance.
Data Quality Review: CDX successfully completed independent security risk assessment in the Summer 2001. In addition, routine audits of CDX data collection procedures and customer service operations are provided weekly to CDX management and staff for review. Included in these reports are performance measures such as the number of CDX new users, number of submissions to CDX, number of help desk calls, number of calls resolved, ranking of errors/problems, and actions taken. These reports are reviewed and actions discussed at weekly project meetings.
Data Limitations: The CDX system collects, reports, and tracks performance measures on data quality and customer service. While its automated routines are sufficient to screen systemic problems/issues, a more detailed assessment of data errors/problems generally requires secondary level of analysis that takes time and human resources.

New/Improved Data or Systems: CDX coalesces the registration/submission requirements of many different state-to-EPA data exchanges into a single web-based system. The system allows for a more consistent and comprehensive management and performance tracking of many state customers. The creation of a centralized registration system, coupled with the use of web forms and web-based approaches to submitting the data, invite opportunities to introduce automated quality assurance procedures for the system and reduce human error.

Performance Measure: The number of forms containing Toxic Release Inventory data being reported electronically on computer diskettes will increase from 85% to 90%.
Performance Database: Toxics Release Inventory (TRI) System
Data Source: EPA tracks on a weekly basis the production statistics for TRI data. These statistics report how TRI data are transmitted to EPA by facilities: on paper; through the Central Data Exchange or by diskette.
QA/QC Procedures: The determination of how data are received is automated through system modules in TRIS.
Data Quality Review: EPA reviews the production statistics on a weekly basis.
Data Limitations: N/A
New/Improved Data or Systems: N/A

Performance Measure: Implement four data standards in 13 major systems and develop four additional standards in 2003.
Performance Database: N/A
Data Source: Data on implementation is provided by system and program managers to Data Standards Branch (DSB) staff in the Office of Environmental Information (OEI) and recorded in a Data Standards Implementation Matrix. The development of new data standards is a cooperative process with state and Tribal partners.
QA/QC Procedures: Once drafted, new data standards are made available for public review and comment through notices in the Federal Register, on EPA's Environmental Data Registry (www.epa.gov/edr), and on the Environmental Data Standards Council (EDSC) website (www.epa.gov/edsc). DSB staff use periodic conformity reviews to confirm compliance with final Agency standards in individual systems. In addition, staff provide outreach and training to system and program managers to help implement the data standards.
Data Quality Review: During the Capital Planning and Improvement Control process, information included in the Data Standards Implementation Matrix is reviewed annually. Once developed, the EDSC annually reviews data standards for usefulness and applicability to EPA, state, and Tribal business needs.

Data Limitations: Due to resource limitations, DSB staff cannot perform detailed conformity analyses on every system. In addition, conformity reviews do not necessarily indicate how data are transferred from systems. Finally, conformity reviews suggest conformance options but do not guarantee their implementation in the systems.
New/Improved Data or Systems: Data Standards improve the consistency, quality, and comparability of data managed in EPA systems. Developing new standards and ensuring the implementation of those in place allows for enhanced data integration and exchange.

Coordination with Other Agencies

EPA works on environmental information with its state partners under the State/EPA Information Management Workgroup and the Environmental Data Standards Council. The State/EPA workgroup has created seven action teams to jointly develop key information projects. Action teams consist of EPA, state. and Tribal members. They are structured to result in consensus solutions to information management issues which affect states, Tribes, and EPA. such as the development and use of environmental data standards, and implementation of new technologies for collecting and reporting information.

EPA also participates in multiple workgroups with other federal agencies including the U.S. Geological Survey (USGS), Federal Geographic Data Committee (FGDC), and Chief Information Officer Council. The Agency is actively involved with a variety of agencies in developing government-wide e-government reforms. and continues to participate with the Office of Homeland Security and national security agencies on homeland security. These multi-agency workgroups are designed to ensure consistent implementation of standards and technologies across Federal agencies in order to support efficient data sharing.

The TRI program coordinates with other Federal agencies. particularly those that are required to report to TRI pursuant to Executive Order 13148 (Greening the Government through Leadership in Environmental Management), such as the Department of Energy and the Department of Defense. EPA works with the other agencies in helping them determine how their facilities should best report to TRI. Further, other agencies such as the Internal Revenue Service use TRI data. EPA works with these agencies to facilitate access and use of the data.

The TRI program coordinates with other Federal agencies in performing hazard assessments of TRI chemicals to ensure that consistent data sets are used and, to the extent possible, that interpretation of data is consistent. In addition. TRI is one of the leading systems of its type in the world. As such, EPA participates in a number of international consortia on TRI-type systems. TRI, along with its Canadian equivalent comprise the North American Pollutant Release and Transfer Register. In these arenas. EPA coordinates with the Department of State and other Federal agencies. Finally, the TRI program has substantial interaction with state agencies. States use TRI data for a number of purposes; such as in geographic information systems.

EPA will work with the Small Business Administration. as appropriate, on regulations that affect small businesses. In developing health assessments for the IRIS database, EPA interacts frequently with other Federal agencies involved in health assessments and research. In the initial drafting, documents such as AToxicological Profiles@ produced by Health and Human Services/Agency for Toxic Substances and Disease Registry (HHS/ATSDR) are routinely consulted for information. EPA also consults and utilizes assessments and research findings from the Food and Drug Administration, the National Toxicology Program, the National Institute of Environmental Health Sciences and the National Library of Medicine Federal agencies are also consulted for peer review of draft IRIS assessments. Finally, the IRIS website has electronic links to other agencies' websites for the education and convenience of the IRIS user.

Statutory Authorities

National Environmental Education Act
Federal Managers Financial Integrity Act
Government Performance and Results Act
Clinger-Cohen Act
Computer Security Act
Privacy Act
Clean Air Act (42 U.S.C. 7601-7671q) and amendments
Clean Water Act (33 U.S.C. 1251 - 1387) and amendments
Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601-9675)
Emergency Planning and Community Right-to-Know Act section 313 (42 U.S.C. 110001-11050)
Government Paperwork Elimination Act
Federal Insecticide, Fungicide and Rodenticide Act (7 U.S. C. 136-136y)
Pollution Prevention Act (42 U.S.C. 13101-13109)
Resource Conservation and Recovery Act (42 U.S.C. 6901-6992k)
Safe Drinking Water Act section 1445 (42 U.S.C. 300f-300j-26)
Toxic Substance Control Act section 14 (15 U.S.C. 2601-2692)
North American Agreement on Environmental Cooperation
Freedom of Information Act (5 U.S.C. 552)
Paperwork Reduction Act Amendment of 1995 (44 U.S.C. 3501-3520)
Small Business Regulatory Enforcement Fairness Act
Unfunded Mandates Reform Act
Congressional Review Act
Regulatory Flexibility Act

Executive Order 13148, AGreening the Government through Leadership in Environmental Management@
Enterprise for the Americas Initiative Act (7 U.S.C. 5404)
Environmental Research, Development, and Demonstration Act (ERDDA) of 1981
Federal Advisory Committee Act (FACA) (5 U.S.C. App.)
Federal Food, Drug and Cosmetic Act (FFDCA)
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S. C. 136-136y)
Executive Order 12915 - Federal Implementation of the North American Agreement on Environmental Cooperation
Superfund Authorization Reauthorization Act (SARA)

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Quality Environmental Information

Objective: Provide Access to Tools for Using Environmental Information.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Provide Access to Tools for Using Environmental Information.	**$83,127.7**	**$53,515.0**	**$48,181.3**	**($5,333.7)**
Environmental Program & Management	$63,688.0	$39,786.3	$34,707 9	($5,078.4)
Hazardous Substance Superfund	$3,123 9	$3,002.0	$4,105 9	$1,103.9
Science & Technology	$16,315.8	$10 726.7	$9,367 5	($1,359 2)
Total Workyears	210.8	183 5	169.7	-13.8

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Administrative Services	$169 4	$0.0	$0 0	$0 0
Capacity Building	$0 0	$0.0	$162 8	$162.8
Communicating Research Information	$5,955 6	$5,543.7	$5 569 6	$25.9
Congressionally Mandated Projects	$0.0	$6 175 0	$0 0	($6,175.0)
Data Collection	$1,888.5	$125.9	$125 9	$0 0
Data Standards	$3,092 5	$4 839 9	$3,695.2	($1,144.7)
EMPACT	$10,607 5	$0 0	$0 0	$0.0
Environmental Justice	$4,986.9	$5,064 4	$4,978.8	($85 6)
Facilities Infrastructure and Operations	$2,950.7	$2,865.7	$2,345.8	($519.9)
Geospatial	$522.3	$860.5	$279.4	($581 1)
Homeland Security	$0 0	$260.1	$0 0	($260 1)
Information Integration	$1,940.8	$1,440.3	$0.0	($1,440 3)
Information Technology Management	$12,803 1	$7,206.7	$9,362.1	$2,155.4
Legal Services	$751 9	$812.2	$925.0	$112 8
Management Services and Stewardship	$1,421 5	$918.8	$799.9	($118 9)
Public Access	$6,666.4	$7,252.6	$9,983.5	$2,730.9
Regional Management	$740 6	$715.7	$754 3	$38 6
Reinventing Environmental Information (REI)	$0.0	$2,290.9	$2,277.3	($13 6)
System Modernization	$5,891.4	$6,265.0	$5,835 4	($429 6)
Toxic Release Inventory / Right-to-Know (RtK)	$0 0	$877.6	$1,086 3	$208.7

FY 2003 Request

EPA will continue to support comprehensive approaches to environmental protection, including supporting information management approaches that integrate and interpret the many data sets and information sources that are used to support environmental decisions. These include the increased availability and accuracy of locational and spatial data and related mapping tools. To further enhance these efforts, the Agency is committed to working in partnership with the United States Geographical Survey (USGS) and the Federal Geographic Data Committee (FGDC) to implement a national spatial data infrastructure, which will enhance communities ability to pinpoint the environmental information most relevant to their locale.

EPA will provide environmental analysis that responds to the needs of its partners and stakeholders, complementing data access with analysis to support environmental understanding. On a continuing basis, EPA will dialogue with its partners and stakeholders to make sure their needs are fully understood and are being addressed. Users will have choices between accessing data as submitted, using EPA-provided analytical tools to help draw their own conclusions from the data, and using analytical information products that present information derived from the data. The analytical environment will provide capabilities for geospatial analyses to support community-based efforts, visualization to facilitate interpretation of data, and statistical analyses that use reliable software and algorithms to aid in data interpretation.

EPA will promote analytical approaches that integrate data from different sources to provide a more holistic view and understanding of the environment, encouraging informed decision-making. EPA will undertake a best practices series of documents specifying the proper steps for creating information usable for decision making. Insights gained from environmental analysis will support a fuller understanding of environmental outcomes, and remaining challenges. Environmental analysis will support better regulatory decision-making and greater knowledge about the environment.

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

The Agency will continue the development of its Environmental Indicators Initiative (EII) in order to establish a set of performance indicators that measure environmental results. Environmental indicators are an important tool for simplifying, analyzing, and communicating information about environmental conditions and human health. EPA is in the process of compiling an Agency-wide indicator inventory that will be used to produce a state-of -the environment report in the short term and, in the long term, will be utilized to identify gaps and set priorities for the EII. These indicators will measure the impact of human activities on the environment and the associated health effects on communities and ecosystems.

In 2003, EPA will continue to modernize its programmatic and administrative information systems. Modernizing information systems will drive Agency technology decisions which affect capacity on networks, data storage, and services to the Agency and public. Updating our programmatic systems will include acquiring Agency-wide data sets and improving the accuracy of locational data. The Agency will also redesign its capital planning and investment control process to assure more efficient use of Agency information technology resources and improved accounting of information technology expenditures through project control and monitoring. This process will also be more closely integrated with the Agency's enterprise architecture, integration initiative, and budget process. These projects will be planned and managed under the Clinger-Cohen Act investment review, with oversight by EPA management.

EPA's environmental justice program will continue education, outreach, and data availability initiatives. The Program provides a central point for the Agency to address environmental and human health concerns in minority communities and/or low-income communities-- a segment of the population which has been disproportionately exposed to environmental harms and risks. The program will continue to manage the Agency's Environmental Justice Community Small Grants program which assists community-based organizations that are working to develop solutions to local environmental issues.

The Community Small Grants Program was established in 1994, and, since then, more than 950 grants of up to $20,000 each have been awarded to community organizations. As a result of these grant awards, community-based organizations (i.e., grassroots groups, churches, and other nonprofit organizations) have expanded citizen involvement and given people the tools to learn more about exposure to environmental harms and risks, and, consequently, to protect their families and their communities as they see fit. In sum, these small grants have served as the seed-money for empowerment of the residents of these communities which have allowed them to speak for themselves and to make their own decisions.

The Agency will continue to support the National Environmental Justice Advisory Council (NEJAC) which provides the Agency significant input from all interested stakeholders such as community-based organizations, business and industry, academic institutions, state, Tribal and local governments, non-governmental organizations and environmental groups. Six subcommittees were created around EPA's broad statutory mandates and are sponsored by the cognizant EPA office. The subcommittees are: Air/Water; Enforcement; Health/Research; Indigenous People; International; and Waste/Facility Siting.

The Agency will also continue to chair an Interagency Working Group (IWG) consisting of eleven departments and agencies as well as White House offices to ensure that environmental justice concerns are incorporated into all Federal programs. In 2000, the IWG began implementation of an Action Agenda which is centered around fifteen demonstration projects in diverse urban and rural communities in virtually all regions of the nation. The agenda is designed to achieve a variety of goals, ranging from environmental cleanup, brownfields and economic development and children's health to community education and capacity building. To date, these demonstration projects have leveraged more than $12 million in public/private resources.

The Agency supports and encourages user-friendly environmental justice programs of state and Tribal governments and conducts outreach and technical assistance to states, local governments, and all stakeholders on environmental justice issues. In order to be able to respond to an allegation of environmental injustice, it is essential to identify the affected community. In 2001, the Environmental Justice Mapper was developed for the Internet to provide all stakeholders with information about a selected location. The Environmental Justice Mapper reflects environmental data available from the Agency's data warehouse and demographic data provided by the U.S. Census Bureau. Links are provided to the health-related database of the Department of Health and Human Services. Another essential tool to foster the integration of environmental justice into Federal programs, policies and activities is training.

In support of the Agency's environmental justice efforts, criminal investigations and civil enforcement actions will be focused on industries that have repeatedly violated environmental laws in minority and/or low-income areas.

Research

EPA supports a portfolio of research and regulatory programs to develop and apply environmental health and ecological risk assessment methods, models, and information, ecological toxicity information, and improvements in monitoring, measurement, and data management technologies to protect human health and the environment. Providing all Americans with access to sound environmental information and involving the public in EPA's work are essential parts of a comprehensive approach to protecting the environment. Access to environmental information enables scientists, risk assessors, government officials, and the public to be involved and to make informed environmental decisions.

An important part of EPA's effort to provide readily accessible information is the Integrated Risk Information System (IRIS), an EPA database of Agency consensus health information on environmental contaminants. The database is used extensively by EPA Program Offices and Regions, the states, and the general public where consistent, reliable toxicity information is needed for credible risk assessments. Other work in this area includes that of the Agency's Risk Assessment Forum (RAF), which promotes EPA-wide consensus on difficult and controversial risk assessment issues and ensures that this consensus receives appropriate peer input and review, and is incorporated into EPA risk assessment guidance. Additional environmental information is made available through the Evaluation and Interpretation of Suitable Tests Results in AQUIRE[1] (EVISTRA), a database which provides EPA's Program Offices and Regions with ecological toxicity information.

Integrated Risk Information System (IRIS)

[1]AQUIRE (Aquatic Toxicity Information Retrieval) is a database containing scientific papers published both nationally and internationally on the toxic effects of chemicals on aquatic organisms and plants

The human health effects information in IRIS is widely used for risk assessments and other health evaluations at all levels of government, as well as in the public and private sectors. As more risk-based decision-making takes place at the state and local levels, it is essential to provide access to current and credible health effects information, critical for sound risk assessments. To ensure the quality, accuracy, credibility, and applicability of IRIS data, all assessments undergo external scientific peer review.

In FY 2003, the Agency's research program will continue its efforts to: 1) produce, update, and maintain health assessments in IRIS; 2) ensure appropriate external peer review of IRIS summaries and support documents; 3) facilitate Agency consensus and resolve issues in a timely manner; 4) maintain a widely-accessible Internet version of IRIS, including explanatory materials, available at the local level to support community-based environmental protection; and 5) provide active outreach and communication with current and potential new users.

Risk Assessment Forum

The Agency's Risk Assessment Forum (RAF) will continue to develop a number of products to assist risk assessors, such as risk assessment guidelines, technical panel reports on special risk assessment issues, and peer consultation and peer review workshops addressing controversial risk assessment issues. In FY 2003, the RAF will focus on: cumulative risk assessment, ecological risk assessment, and risk assessments for children; and will develop various issue papers, workshop reports, and risk assessment guidance documents.

EVISTRA

EVISTRA involves the development and maintenance of a high quality database to provide ecological toxicity information to Regions, states and the public. The EVISTRA database contains ecological toxicity information used to develop water quality criteria for the protection of aquatic life, terrestrial plants, and terrestrial wildlife. The database will make available evaluated and interpreted results of selected aquatic toxicity tests. EVISTRA became available on the Internet in FY 2001 with the initial release of critically evaluated chemical effects data to support risk assessments and criteria development for aquatic life and terrestrial wildlife. In FY 2003, the Agency will continue to develop and maintain the EVISTRA database.

FY 2003 Change from FY 2002 Enacted

EPM

- (+$2,243,200, 0 FTE) Provides funding to make EPA's information more accessible (both within and outside of EPA) by acquiring and implementing an Agency-wide electronic records and document management system. The increase will support the necessary software and hardware to begin phased implementation of the software throughout the Agency.

- (+$784,600, 0 FTE) Represents an internal redistribution of resources to better reflect where the work associated with these dollars is actually being done.

Research

S&T

- No significant change

EPM

- (-$4,875,000) The FY 2003 Request is $4,875,000 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process which are not included in the FY 2003 President's Request.

Annual Performance Goals and Measures

Environmental Justice

In 2003	Ensure that EPA's policies, programs and activities address disproportionately exposed and under-represented population issues so that no segment suffers disproportionately from adverse health and environmental effects
In 2002	Ensure that EPA's policies, programs and activities address disproportionately exposed and under-represented population issues so that no segment suffers disproportionately from adverse health and environmental effects
In 2001	While EPA did meet the measuresabouth he public meetings and responding to requests during NEJAC meetings, EPA did not meet the other targets

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Hold 25 EPA-sponsored public meetings held where disproportionately impacted and disadvantaged communities participate	25			meetings
Respond within 60 days to 75% of requests made to each Region and National Program Manager to address complaints heard during public comment period at NEJAC	75			percent
Conduct 18 National Environmental Justice Advisory Commitee (NEJAC) meetings and focused roundtables in local communities where problems have been identified	13			meetings
Hold one NEJAC public meeting annually where one environmental policy which impacts disadvantaged communities is discussed and the communities actively participate			1	Meeting
Hold meetings with the (NEJAC), all statkeholders involved in the environmental justice dialogue, and communities disproportionately impacted by environmental hazards		30		meetings
Continue to engage the agencies in national issues of environmental concerns through the collaborative efforts of the IWG through the publication "Action Agenda for Environmental Justice"			1	Agenda
Award grants to organizations which address environmental problems in communities disproportionately impacted by environmental hazards		90	90	grants
Increase the cumulative number of demonstration projects established under the Fed Interagecy Working Group on Env Justice		25		Projects

Baseline The Agency works to address issues affecting disproportionately exposed and under-represented populations from adverse health or environmental effects EPA identifies problem areas through public comments received during the National

Environmental Justice Advisory Committee (NEJAC) meetings reviewing Environmental Impact Statements (EIS) filed under the National Environmental Policy Act (NEPA) in which environmental justice (EJ) indicators occur, concern from communities about new or renewals of permits under RCRA, CWA, CAA, etc., and complaints filed under Title VI of the Civil Rights Act. EPA also works to address these issues through the Federal Interagency Working Group on Environmental Justice and by awarding grants to communities for addressing environmental problems.

Data Quality

In 2003 The public will have access to a wide range of Federal, state, and local information about local environmental conditions and features in an area of their choice

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Publicly available facility data from EPA's national systems, accessible on the EPA Website will be part of the Integrated Error Correction Process.		100		Percent
Window-to-My Environment is fully operational and serving citizens across the country with Federal, state, and local environmental information specific to an area of their choice			Fully	Operational
Percent compliance with 13 criteria used by OMB to assess Agency security programs reported annually to OMB under the Government Information Security Regulatory Act			75	Percent

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

Research

Environmental Science Information

In 2003 Deliver assessments of effects of exposure to chemicals on human health and the environment to EPA, other governmental organizations, industry, consultants, academies, and nongovernmental organizations to promote scientifically sound, consistent risk assessments to enhance protection of human health

In 2002 Improve environmental decision making, risk assessment and risk communication by synthesizing human health assessment information on environmental substances

In 2001 EPA collected, managed, and presented environmental information for the benefit of the Agency and the public in order to enhance the availability and utility of data, information, and tools for decision-making

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Develop new and/or update Agency consensus human health assessments of 15 environmental substances of high priority to EPA and make them publicly available on IRIS	7			assessments
Develop a priority list of existing data, information, and tools to provide assistance to EPA laboratories in the initial development of their inventories, to be made publicly available through EIMS	1			list
Draft human health assessments (new and updated assessments) of 9 environmental substances of high priority to EPA for Agency IRIS consensus review		9		assessments
Develop Agency consensus for human health assessments (new/updated) for 8-10 environmental substances of high priority to EPA, and make these accessible on the EPA IRIS Internet site			8-10	assessments

Baseline The Integrated Risk Information System (IRIS) is an electronic data base containing information on human health effects that may result from exposure to various chemicals in the environment for use in risk assessments, decision-making, and regulatory activities. Through the IRIS Program, ORD administers an Agency-wide process of chemical nomination, assessment, consensus building, and peer review through which assessments on IRIS are produced and updated. As of December 2000, IRIS contained entries for 541 compounds. The IRIS program is continuously producing new assessments and updating existing IRIS assessments as new information becomes available. The information in IRIS is intended for those without extensive training in toxicology but with some knowledge of health sciences. The individual chemical files in IRIS contain descriptive and quantitative information in the following categories: oral reference doses and inhalation reference concentrations (RfDs and RfCs, respectively) for chronic noncarcinogenic health effects, hazard identification, oral slope factors and oral and inhalation unit risks for carcinogenic effects.

Verification and Validation of Performance Measures

Performance Measure: Window to My Environment (WME) is fully operational and serving citizens across the country with Federal, state, and local environmental information specific to an area of their choice.
Performance database: Envirofacts Data Warehouse and Integrated Geospatial Database (IGD).
Data Source: Data originated from Agency legacy database systems, such as, RCRIS, AIRS, and PCS and from Agency and state environmental websites.
QA/QC procedures: WME quality assurance procedures occur on several levels. Each of the legacy databases feeding into Envirofacts and the IGD have their own QA/QC screens and procedures to verify the data submitted. As the data are uploaded to Envirofacts and the IGD, a series of Envirofacts QA/QC protocols are conducted to assure that the upload is complete and accurate. The WME interface provides a self-checking mechanism that routinely monitors the stability of its website links to assure that links to external sites are functional and useful.

Data Quality Review: WME is a part of the Agency's error correction process - which serves to facilitate the reporting of data errors and track their correction.
Data Limitations: All of the data reported through the WME interface originates somewhere else - either from an EPA data source, from other Federal data sources (e.g., U.S. Geological Survey, Federal Emergency Management Agency (FEMA), and others) or from state data sources. Ultimately, the data and the conclusions derived from the data are only as good as the underlying data.
New/Improved Data or Systems: WME is currently being expanded to 4 EPA Regions (Regions 3,5,6,8) and is expected to be available nationally by end of 2002.
FY 2003 Congressional Performance Measure (PM): Award a minimum of 90 grants to organizations which address environmental problems in communities comprised primarily of low income and minority populations.
Performance Database: Output Measure. Internal tracking system.
Data Source: Manual system. (Regional Environmental Justice grant coordinators will input data.)
QA/QC Procedures: None
Data Quality Review: None
Data Limitations: None
New/Improved Data or Systems: None

FY 2003 Congressional Performance Measure (PM): Continue to engage Federal agencies in national issues of environmental concerns through the collaborative efforts of the

Federal Interagency Working Group on Environmental Justice (IWG) through the publication AAction Agenda for Environmental Justice, which describes the national projects where collaboration among the various stakeholders has been successful in addressing environmental problems.
Performance Database: Output Measure with no internal tracking system.
Data Source: EPA representatives to the Federal Interagency Working Group on Environmental Justice
QA/QC Procedures: None
Data Quality Review: None
Data Limitations: None
New/Improved Data or Systems: None
Performance Measure (PM): Award a minimum of 90 grants to organizations which address environmental problems in communities comprised primarily of low income and minority populations.

Performance Database: Output Measure. Internal tracking system.

Data Source: Manual system. Regional Environmental Justice grant coordinators input data.

QA/QC Procedures: None.

Data Quality Review: None.

Data Limitations: None.

New/Improved Data or Systems: None.

Performance Measure (PM): Continue to engage Federal agencies in national issues of environmental concerns through the collaborative efforts of the Federal Interagency Working Group on Environmental Justice (IWG) through the publication AAction Agenda for Environmental Justice, which describes the national projects where collaboration among the various stakeholders has been successful in addressing environmental problems.

Performance Database: Output measure with no internal tracking system.

Data Source: Not applicable.

QA/QC Procedures: Not applicable.

Data Quality Review: Not applicable.

Data Limitations: Not applicable.

New/Improved Data or Systems: Not applicable.

Coordination with Other Agencies

In 2003, EPA will continue to coordinate with key Federal data sharing partners including the USGS, Bureau of Indian Affairs, and the Fish and Wildlife Service as well as state and local data sharing partners in public access information initiatives such as Window-to-My-Environment and Enviromapper. With respect to community-based environmental programs, EPA coordinates with state, Tribal, and local agencies and with non-governmental organizations to design and implement specific projects.

The nature and degree of EPA's interaction with other entities varies widely, depending on the nature of the project and the location(s) in which it is implemented. EPA is working closely with the FGDC and the USGS to develop and implement the infrastructure for national spatial data. For the Environmental Indicators Initiative, EPA is coordinating its program with other state and Federal organizations, including the Council for Environmental Quality and the Environmental Council of States, to insure that the appropriate context is represented for observed environmental and human health conditions.

Regular meetings are held with agencies named in Executive Order 12898 to review the environmental justice activities underway; to develop appropriate training tools; and to discuss participation in the National Environmental Justice Advisory Council (NEJAC).

Research

In developing health assessments for the IRIS database, EPA interacts frequently with other Federal agencies involved in health assessments and research. In the initial drafting, documents such as "Toxicological Profiles" produced by Health and Human Services/Agency for Toxic Substances and Disease Registry (HHS/ATSDR) are routinely consulted for information. EPA also consults and utilizes assessments and research findings from the Food and Drug Administration, National Toxicology Program, National Institute of Environmental Health Sciences, and the National Library of Medicine. Federal agencies are also consulted for peer review of draft IRIS assessments. Finally, the IRIS website has electronic links to other agencies' websites for the education and convenience of the IRIS user.

Statutory Authorities

Pollution Prevent Act (PPA)
Federal Fungicide, Insecticide and Rodenticide Act
Federal Food, Drug and Cosmetic Act
Safe Drinking Water Act
Federal Managers Financial Integrity Act
Government Performance and Results Act
Paperwork Reduction Act
Freedom of Information Act
Computer Security Act
Privacy Act

Electronic Freedom of Information Act
Government Paperwork Elimination Act
National Environmental Education Act
Federal Managers Financial Integrity Act (FMFIA)
Government Performance and Results Act (GPRA)
Clinger-Cohen Act
Freedom of Information Act (FOIA)
Clean Air Act (CAA) (42 U.S.C. 7601-7671q) and amendments
Clean Water Act (CWA) (33 U.S.C. 1251 - 1387) and amendments
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601-9675)
Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 110001-11050)
Federal Advisory Committee Act (FACA)
Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)
Safe Drinking Water Act (SDWA) section 1445 (42 U.S.C. 300f-300j-26)
Toxic Substance Control Act (TSCA) section 14 (15 U.S.C. 2601-2692)
North American Agreement on Environmental Cooperation
Small Business Regulatory Enforcement Fairness Act (SBREFA)
Unfunded Mandates Reform Act
Congressional Review Act
Regulatory Flexibility Act
Executive Order 12866
Plain Language Executive Order Emergency Planning and Community Right-to-Know Act
Pollution Prevention Act
Federal Fungicide, Insecticide and Rodenticide Act

Research

Clean Air Act (CAA) and amendments
Clean Water Act (CWA) and amendments
Environmental Research, Development, and Demonstration Act (ERDDA) of 1981
Toxic Substances Control Act (TSCA)
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
Food Quality Protection Act (FQPA)
Safe Drinking Water Act (SDWA) and amendments
Federal Food, Drug and Cosmetic Act (FFDCA)
Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Superfund Authorization Reauthorization Act (SARA)

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Quality Environmental Information

Objective: Improve Agency Information Infrastructure and Security.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Improve Agency Information Infrastructure and Security.	**$16,817.7**	**$23,814.1**	**$30,528.0**	**$6,713.9**
Environmental Program & Management	$11,567.4	$19,897.5	$25,564.5	$5,667.0
Hazardous Substance Superfund	$5,250.3	$3,916.6	$4,963.5	$1,046.9
Total Workyears	1.1	184.4	185.3	0.9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena
Administrative Services	$64.6	$0.0	$0.0	$0.0
Data Collection	$1,342.3	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$409.9	$1,648.9	$1,558.5	($90.4)
Homeland Security	$0.0	$1,928.4	$0.0	($1,928.4)
Information Integration	$199.6	$0.0	$10,428.5	$10,428.5
Information Technology Management	$14,465.4	$17,441.8	$15,720.2	($1,721.6)
Legal Services	$156.8	$188.3	$202.3	$14.0
Management Services and Stewardship	$0.0	$368.1	$254.2	($113.9)
Public Access	$1,964.7	$375.2	$420.7	$45.5
Reinventing Environmental Information (REI)	$0.0	$1,266.1	$1,343.6	$77.5
System Modernization	$600.0	$597.3	$600.0	$2.7

FY 2003 Request

During 2003, EPA will continue to provide a robust and secure information infrastructure, thereby increasing the availability and accessibility of environmental information to customers and stakeholders. EPA's information technology program consists of infrastructure support services, as well as policy and planning services. It provides the basic foundation for developing and managing all EPA information systems and information products. It comprises the Agency's hardware, software, and telecommunications assets and the technical services to support those infrastructure assets. These services range from mainframe, high performance computing, and distributed processing services to desktop computing support, local area network operations, internet services, and application development consulting.

Building and maintaining a credible and effective Agency information technology program requires a strong commitment to customer service as well as strategic investment in new technology to ensure efficient services delivery. It also requires a commitment to develop a highly skilled workforce capable of managing complex, multi-year information technology projects. EPA will continue to identify the skills, the technology and the services critical to effectively manage and secure the Agency's information infrastructure. When acquiring these critical resources, EPA will ensure its investments are cost-effective and based on the investment principles established in the Clinger-Cohen Act.

The information technology infrastructure planning process continues to be guided by the Agency's information priorities, including strengthening information security, ensuring data integrity, and leveraging new technology to support EPA environmental programs. With the emergence of the Internet as a fundamental business tool, EPA's new paradigm of security has become one that emphasizes not only mainframe security but also extends to the Agency's growing use of the Internet. The Agency will continue to emphasize the goal of strengthening security plans and organizational security programs through additional reviews and oversight on an Agency-wide scale. Increased efforts and investments will also be made to raise the awareness level of the EPA workforce to ensure managers understand their individual responsibilities for protecting information assets. In addition, EPA will continue its aggressive efforts to assess and respond to evolving threats and integrate information security into its day-to-day business.

FY 2003 Change from FY 2002 Enacted

Superfund

- (+$2,504,100, 0 FTE) Provides support for the Agency to build the Information Exchange Network infrastructure needed to meet the needs of the states and our other data partners.

EPM

- (+$5,707,200, 0 FTE) Provides support for the Agency to build the Information

Exchange Network infrastructure needed to meet the needs of the states and our other data partners.

Coordination with Other Agencies

EPA will continue to coordinate with other Federal agencies on information technology infrastructure and security issues by participating on the Federal Chief Information Officers' (CIO) Council. Comprised of members from the 28 largest Federal agencies, the CIO Council serves as the primary mechanism for sharing information on IT best practices and for developing common solutions to IT challenges facing the Federal government. EPA will continue to participate on the CIO Council Committees on security, capital planning, workforce development, interoperability, and e-government and will engage with other Federal agencies in ensuring the infrastructure for homeland security. EPA will also continue to coordinate with state agencies on information technology infrastructure and security issues through state organizations such as the National Association of State Information Resources Executives. In addition, EPA, along with other Federal agencies, is involved in Office of Management and Budget-led e-government initiatives. As part of this effort, EPA, OMB, the Department of Transportation, and 10 other Federal agencies are examining the expansion of EPA's Regulatory Public Access System, a consolidated on-line rule-making docket system providing a single point of access for all Federal rules. EPA is also coordinating efforts with the National Archives and Records Administration on an e-records initiative. This effort is aimed at establishing uniform procedures, requirements, and standards for electronic record keeping of Federal e-government records.

Annual Performance Goals and Measures

Information Security

In 2003 OMB reports that all EPA information systems meet/exceed established standards for security.

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Critical infrastructure systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document		12		Systems
Critical financial systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document		13		Systems
Mission critical environmental systems risk assessment findings will be formally documented and transmitted to systems owners and managers in a formal Risk Assessment document		5		Systems
Percent compliance with 13 criteria used by OMB to assess Agency security programs reported annually to OMB under the Government Information Security Regulatory Act			75	Percent
Percent of intrusion detection monitoring sensors installed and operational			75	Percent

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

Verification and Validation of Performance Measures

Performance Measure: Percent of intrusion detection monitoring sensors installed and operational.
Performance Database: None
Data Source: Contractor task reports, verified by OEI.
QA/QC Procedures: QA/QC procedures consistent with Quality Assurance Plan.
Data Quality Review: NA
Data Limitations: Data reflect the contractor's completion of technical tasks that are easily verified by OEI. Thus, there are thus no serious data limitations.
New/Improved Data or Systems: NA

Performance Measure: Percent compliance with 13 criteria used by Office of Management and Budget (OMB) to assess Agency security programs reported annually to OMB under Government Information Security Regulatory Act.
Performance Database: The Office of Environmental Information (OEI) maintains historical files of OMB's written assessment of EPA's annual security program report.
Data Source: EPA's security staff, located within the Office of the Chief Information Officer (CIO), track Agency compliance with the OMB criteria.
QA/QC Procedures: OEI reviews, interprets, and verifies the basis for OMB's written assessment. Physical tests of Agency systems are conducted using best industry practice testing protocols. Automated monitoring tools test and audit for compliance with Information Technology (IT) security standards. EPA's IT planning staff, under the CIO, check for appropriate security planning and procedures as part of the Information Technology Management Reform Act (ITTMRA) capital planning and investment process required by federal law.
Data Quality: Program offices are required to develop security action plans composed of tasks and milestones in a number of security action areas. Program offices self report progress toward these milestones. EPA's security staff review these self-reported data and discuss anomalies with the submitting office.
Data Limitations: Resources constrain the security staff's ability to validate all of the self-reported compliance data submitted by program systems' managers.
New/Improved Data or Systems: NA

Statutory Authorities

Federal Advisory Committee Act
Government Information Security Reform Action
Comprehensive Environmental Response, Compensation, and Liability Act
Clean Air Act and amendments
Clean Water Act and amendments
Environmental Research, Development, and Demonstration Act of 1981
Toxic Substance Control Act

Federal Insecticide, Fungicide, and Rodenticide Act
Food Quality Protection Act
Safe Drinking Water Act and amendments
Federal Food, Drug and Cosmetic Act
Emergency Planning and Community Right-to-Know Act
Comprehensive Environmental Response, Compensation, and Liability Act
Superfund Amendments and Reauthorization Act
The Government Performance and Results Act (1993)
Government Management Reform Act (1994)
Clinger-Cohen Act
Paperwork Reduction Act
Freedom of Information Act
Computer Security Act
Privacy Act
Electronic Freedom of Information Act
Pollution Prevention Act

Goal 8: Sound Science, Improved Understanding of Environmental Risks, and Greater Innovation to Address Environmental Problems VIII-1
Conduct Research for Ecosystem Assessment and Restoration VIII-9
Improve Scientific Basis to Manage Environmental Hazards and Exposures VIII-18
Enhance Capabilities to Respond to Future Environmental Developments VIII-28
Improve Environmental Systems Management VIII-36
Quantify Environmental Results of Partnerships Approaches VIII-45
Incorporate Innovative Approaches VIII-48
Demonstrate Regional Capability to Assist Environmental Decision Making VIII-53
Conduct Peer Review to Improve Agency Decisions VIII-55

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems	**$338,261.4**	**$337,540.9**	**$327,837.9**	**($9,703.0)**
Conduct Research for Ecosystem Assessment and Restoration.	$134,525.5	$120,594.7	$119,114.6	($1,480.1)
Improve Scientific Basis to Manage Environmental Hazards and Exposures.	$52,407.6	$53,021.7	$56,355.0	$3,333.3
Enhance Capabilities to Respond to Future Environmental Developments.	$48,626 6	$64,249.5	$50,965.8	($13,283.7)
Improve Environmental Systems Management.	$59,130.3	$57,757.0	$52,274.1	($5,482.9)
Quantify Environmental Results of Partnership Approaches	$9,539.9	$8,672.7	$9,058.4	$385.7
Incorporate Innovative Approaches.	$24,887.3	$23,324.5	$29,787 9	$6,463.4
Demonstrate Regional Capability to Assist Environmental Decision Making.	$6,417.2	$6,677.9	$6,591.8	($86.1)
Conduct Peer Review to Improve Agency Decisions.	$2,727.0	$3,242.9	$3,690.3	$447.4
Total Workyears	1,006.4	991.6	996.3	4.7

Background and Context

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

environmental results. Under Goal 8, EPA conducts core research to improve our understanding of the fundamental principles underlying risk assessment and risk management.

Today's environmental innovations extend beyond scientific and technological advances; they also include new policies and management tools that respond to changing conditions and needs. Examples include market-based incentives that provide an economic benefit for environmental improvement, regulatory flexibility that gives companies more discretion in how specific goals are met, and disclosure of information about environmental performance. As a result of these and other innovations, the nation's environmental protection system is evolving. The focus is on creating a system that is more efficient and effective and more inclusive of all elements of society.

Means and Strategy

EPA is continuing to ensure that it is a source of sound scientific and technical information, and that it is on the leading edge of environmental protection innovations that will allow achievement of our strategic objectives. The Agency consults a number of expert sources, both internally and externally, and uses several deliberative steps in planning its research programs. As a starting point, the Agency draws input from the EPA Strategic Plan, available research plans, EPA program offices and Regions, Federal research partners, and outside peer advisory bodies such as the Science Advisory Board (SAB). This input is used internally by cross-office teams that prioritize research areas using risk and other factors such as National Science and Technology Council (NSTC) research and development priorities, client office priorities, court orders, and legislative mandates. EPA's research program increases our understanding of environmental processes and our capability to assess environmental risks to both human health and ecosystems.

In the area of ecosystem protection research, EPA will strive to establish baseline conditions from which changes, and ultimately trends, in the ecological condition of the Nation's aquatic ecosystems can be confidently documented, and from which the results of environmental management policies can be evaluated at regional scales. Currently, there is a patchwork of monitoring underway in the aquatic systems of the U.S. Due to differences in objectives, methods, monitoring designs, and needs, these data cannot be combined to estimate, with known confidence, the magnitude or extent of improvement or degradation regionally or nationally in this economically critical resource. Therefore, the ability to demonstrate success or failure of increasingly flexible watershed management policies, regionally and nationally, is also not possible. EPA's ecosystem protection research program is providing the methods and designs to address these weaknesses. In FY 2003, EPA will produce a report on the condition of the nation's estuaries. This report will provide the first integrated, comprehensive, and statistically valid national report card on the health of a specific aquatic resource. This work is an important step toward providing the scientific understanding to measure, model, maintain, and restore the integrity and sustainability of ecosystems.

In order to improve the scientific basis for identifying, characterizing, assessing, and managing environmental exposures that can pose the greatest health risks to the American public, EPA is committed to developing and verifying innovative methods and models for assessing the susceptibilities of sub-populations, such as children, to environmental agents such as pesticides. Many of the current human health risk assessment methods, models, and databases are based on environmental risks for adults. This research is aimed at enhancing current risk assessment and management strategies and guidance to better consider risk determination needs for children. This information will be useful in determining whether children are more susceptible to environmental risks than adults and how to assess risks to children.

EPA's leadership role in protecting both human and ecosystem health requires that the Agency continue to be vigilant in identifying and addressing emerging issues. EPA will continue to enhance its capabilities to anticipate, understand, and respond to future environmental developments. EPA will address these uncertainties by conducting research in areas that combine human health and ecological considerations. Continued research in the areas of endocrine disrupting chemicals and mercury is leading toward the development of improved methodologies for integrated human health and environmental risk assessment and sound approaches for risk management. EPA will conduct research to enhance its capacity to evaluate the economic costs and benefits and other social impacts of environmental policies. These efforts, undertaken in concert with other agencies, will result in improved methods to assess economic costs and benefits; such as improved economic assessments of land use policies and improved assessments for the valuation of children's health, as well as other social impacts of environmental decision-making.

The Agency also seeks to characterize, prevent, and clean up contaminants associated with high priority human health and environmental problems through the development and verification of improved environmental tools and technologies. EPA will incorporate a holistic approach to pollution prevention by assessing the interaction of multiple stressors threatening both human and environmental health, and by developing cost-effective responses to those stressors. Research will also explore the principles governing sustainable systems and the integration of social, economic, and environmental objectives in environmental assessment and management. Emphasis will be placed on developing and assessing preventive approaches for industries and communities having difficulty meeting pollution standards. The Agency is accumulating data on performance and costs of environmental pollution prevention and control technologies that will serve as a basis for EPA, as well as other organizations, to evaluate and compare effectiveness and costs of a variety of technologies developed within and outside the Agency.

In FY 2003, EPA will improve its regulatory and policy development process. The Agency will strengthen the policy analysis of key regulatory and non-regulatory actions, improve the economic analysis underlying Agency actions, and improve the regulatory and policy action information management system.

The Agency also seeks to develop and verify improved tools, methodologies, and technologies for modeling, measuring, characterizing, preventing, controlling, and cleaning up contaminants associated with high priority human health and environmental problems. In order to do this, EPA will develop, evaluate, and deliver technologies and approaches that eliminate,

minimize, or control high risk pollutants from multiple sectors. Emphasis will be placed on preventive approaches for industries and communities having difficulty meeting control/emission/effluent standards.

EPA's strategy for solving environmental problems and improving our system of environmental protection includes developing, implementing and institutionalizing new policy tools, collaborative community-based and sector-based strategies, and the capacity to experiment, test, and disseminate innovative ideas that result in better environmental outcomes. In each area, EPA is looking to advance the application of the innovative tool or approach by promoting broader testing and incorporation into our system of environmental protection and to support collaborative partnerships for environmental management based upon prudent analysis and decision methodologies. For example, EPA's Sector Program Plan 2001-2005 sets forth a vision and specific actions to enhance the effectiveness of innovative sector activities (at the Federal and state levels) and to fully integrate sector approaches into the Agency's overall mission and core programs. Similarly, EPA is strengthening its capacity to evaluate innovative approaches and make institutional changes that adopt successful innovations.

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

Sector strategies complement current EPA activities by allowing the Agency to approach issues more holistically; tailor efforts to the particular characteristics of each sector; identify related groups of stakeholders with interest in a set of issues; link EPA's efforts with those of other agencies; and craft new approaches to environmental protection. EPA is building on successful experiences from its current sector-based programs such as the Sustainable Industries Partnership Programs, Design for the Environment, and sector-based compliance assistance programs to expand the ways in which the Agency is working in partnership with industry sectors to meet high environmental standards using flexible, innovative approaches. While these programs are innovative in and of themselves, they also foster the development of innovations at the industry sector level, testing new regulatory ideas, technologies, tools, and incentives in non-adversarial settings. In a somewhat related effort, EPA is exploring the potential for broader use of a sector-based regulatory model for small businesses developed by the state of Massachusetts.

Strategic Objectives and FY 2003 Annual Performance Goals

Conduct Research for Ecosystem Assessment and Restoration

- Provide the public with a reliable and statistically valid baseline for the condition of the Nation's estuaries against which to measure the success of ecosystem protection and risk management practices.

Improve Scientific Basis to Manage Environmental Hazards and Exposures

Enhance Capabilities to Respond to Future Environmental Developments

Improve Environmental Systems Management

- Develop 10 testing protocols and complete 40 technology verifications for a cumulative Environmental Technology Verification (ETV) program total of 230 to aid industry, states, and consumers in choosing effective technologies to protect the public and environment from high risk pollutants.

Quantify Environmental Results of Partnership Approaches

Incorporate Innovative Approaches

Demonstrate Regional Capability to Assist Environmental Decision Making

Conduct Peer Review to Improve Agency Decisions

Highlights

Research for Ecosystem Assessment and Restoration

In order to balance the growth of human activity with the need to protect the environment, it is important to understand the current condition of ecosystems, what stressors are changing that condition, what the effects are of those changes, and what can be done to prevent, mitigate, or adapt to those changes. In FY 2003 EPA is proposing an initiative to refine and extend the Environmental Monitoring and Assessment Program's (EMAP) approach to the large rivers of the Mississippi River Basin (the Central Basin). The large rivers of the Central Basin are the inland receiving waters for the majority of the Nation's heartland, and are the link between small upland streams and the Gulf of Mexico. Through cooperative programs with the Regions, states, Tribes, and other Federal agencies in the Central Basin, EPA proposes to fill remaining scientific gaps (indicators, sampling design, and sampling methodology) currently limiting our ability to measure the condition of large rivers. EPA will use this information, along with that provided by other agencies, to develop future baseline assessments of Central Basin rivers. The approaches and technology developed within this effort will be transferred to the many responsible parties within the Basin to enable coordinated, scientifically defensible, long-term monitoring of the condition of these rivers that can help inform environmental management decisions affecting these rivers as well as the Gulf of Mexico. These approaches and technologies will also have widespread applicability to all of the Nation's large rivers. Also in FY 2003, the National Coastal Assessment (NCA) program will produce a report on the condition of the nation's estuaries. This report will provide the EPA and Congress with the first integrated, comprehensive, and statistically valid national report card on the health of a specific aquatic resource.

Research for Human Health Risk Assessment

To reduce uncertainties in risk assessment, in FY 2003 human health research will develop measurements, methods, and models to evaluate exposures and effects of environmental contaminants, particularly in children. The Agency will continue to support a children's health research program specifically targeted at addressing major areas of uncertainty and susceptibility. In an effort to address children's exposure in daycare centers and school environments, EPA is proposing new research to develop information on exposure, determinants of exposure for children in school and daycare environments, and approaches to reduce potentially harmful exposures, and to link these with health outcomes that can be measured using school health attendance and performance records. Other children's research focuses on asthma and data gaps (e.g., the Longitudinal Birth Cohort Study).

EPA will also conduct research on the influence of genetic factors on responsiveness to environmental chemicals. The main scientific question for this research is whether genetic differences are sufficient to influence risk assessment. Along with the current program designed to address aggregate and cumulative risks, in FY 2003 the Agency is proposing increased efforts to more comprehensively address these areas. This research is intended to complement and build on EPA's draft *Human Health Research Strategy.* New research will address temporal variation in exposures and its influence on health effects, methods for predicting the relative toxicity of mixture components, the development of biological markers that can quantify exposure, effects and susceptibility, and the use of the biological data and information on biological mechanisms and mode of action to assess cumulative risk.

Research to Enhance Environmental Decision Making

In recent years, EPA has begun to move beyond environmental regulation to anticipate and prevent potential problems before they evolve into major concerns. In FY 2003, research will focus on improving our understanding of the impacts of potential exposure to environmental pollutants, particularly endocrine disrupting chemicals (EDCs) and mercury, on human health and the environment, and on developing approaches to reduce human health and ecological risks. This research will result in accessible and seamless methodologies for combined human health and ecological risk assessments. Additional research results will include an improved framework for decision-making, increased ability to anticipate and perhaps prevent potentially serious environmental risks, improved methods for assessing socio-economic factors, and enhanced communication with the public and other stakeholders. EPA will also direct special grant solicitations to support research at Minority Institutions. This program specifically assists minority institutions in establishing and supporting environmental research activities that would build capacity to assess and solve environmental problems. The cumulative result of EPA research is to provide sound approaches for risk management to decision makers, providing them with the integrated view of risk needed to make intelligent choices.

Improve Environmental Systems Management

In FY 2003, the Agency will continue its systems-based approach to pollution prevention, which will lead to a more thorough assessment of human health and environmental risks and a more

comprehensive management of those risks. EPA will develop tools and methodologies to prevent pollution at its source and will evaluate environmental technologies through the Environmental Technology Verification (ETV) Program. Research will also develop methodologies to better convey the social, economic, and environmental costs and benefits of reducing environmental risks. Additionally, through the National Environmental Technology Competition (NETC), EPA will recognize and reward innovative technologies that produce more effective and lower cost solutions to environmental problems. In FY 2003, EPA plans to develop competitive solicitations for technologies in various areas of environmental concern, including arsenic treatment technologies for small community drinking water systems. Research efforts will also focus on the reduction of persistent bioaccumulative toxics (PBTs) and volatile organic compounds (VOCs). This work will enhance EPA's ability to mitigate harm caused by environmental pollutants and will provide the public and private sectors with cost-effective environmental technologies.

Regulatory and Policy Development

EPA will improve its regulatory and policy development process by strengthening the policy analysis of key regulatory and non-regulatory actions, improving the economic analysis underlying Agency actions, and improving the regulatory and policy action information management system.

Increased Community-Based Approaches

Regional Geographic Initiatives (RGI) are an approach EPA Regional offices use to partner with states, local governments, private organizations, and others to solve environmental problems that are of particular local concern to the Regions and states.

Science Advisory Board Peer Review and Consultations

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

External Factors

Sound science is predicated on the desire of the Agency to make human health and environmental decisions based on high-quality scientific data and information. It challenges the Agency to perform and apply the best available science and technical analysis when addressing health and environmental problems that adversely impact the United States. Such a challenge moves the Agency to a more integrated, efficient, and effective approach of reducing risks. As long as sound science is a central tenet for actions taken by the Agency, then external factors will have a minimal impact on the goal.

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Conduct Research for Ecosystem Assessment and Restoration.

Provide the scientific understanding to measure, model, maintain, and/or restore, at multiple spatial scales, the present and future integrity of highly valued ecosystems.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Conduct Research for Ecosystem Assessment and Restoration.	**$134,525.5**	**$120,594.7**	**$119,114.6**	**($1,480.1)**
Environmental Program & Management	$10,237.9	$6,340.9	$5,960 1	($380.8)
Hazardous Substance Superfund	$0.0	$24 2	$21.6	($2.6)
Science & Technology	$124,287 6	$114,229.6	$113,132.9	($1.096 7)
Total Workyears	349.0	352.6	350.9	-1.7

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Administrative Services	$250.3	$0.0	$0.0	$0.0
Coastal Environmental Monitoring	$7,467.5	$7,325.3	$7,671.2	$345.9
Congressionally Mandated Projects	$7,773.3	$7,770 9	$0.0	($7,770.9)
Ecosystems Condition, Protection and Restoration Research	$65,261.3	$66,707 9	$67,202.1	$494.2
Environmental Monitoring and Assessment Program, EMAP	$29,470.7	$32.360.0	$38,259.6	$5,899.6
Facilities Infrastructure and Operations	$6,537.9	$5,320.2	$4,963.5	($356.7)
Homeland Security	$0.0	$65.5	$0.0	($65.5)
Management Services and Stewardship	$1,397.6	$1,044.9	$1,018 2	($26.7)

FY 2003 Request

Natural ecosystems provide valuable services and resources to the public, such as air and water purification, flood control, food, and raw materials for industrial processes, 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 condition of ecosystems, the stressors changing that condition, the consequences of those changes, and the consequences of preventing, mitigating, or adapting to those changes. EPA's ecological research program has four primary areas of emphasis: 1) ecological monitoring; 2) ecological process and modeling; 3) ecological risk assessment; and 4) ecological risk management and restoration. In FY 2003, improvements in ecological assessment methods targeted at the application/evaluation of Ecological Risk Assessment Guidelines in specific scenarios (e.g., default assessment endpoints, watershed risk assessment, invasive species, dioxin) will increase the decision maker's understanding and use of this scientific information.

Ecological Monitoring Research

EPA's ecological monitoring research efforts consist in large part of the various components of the Environmental Monitoring and Assessment Program (EMAP). EMAP focuses on the monitoring science required to develop EPA's capability to measure trends in freshwater and marine ecosystem health. EMAP includes the National Coastal Assessment (Coastal 2000), Western EMAP, work in landscape ecology, and programs to develop and refine environmental indicators. In FY 2003 the National Coastal Assessment (NCA) program will produce a report on the condition of the nation's estuaries. This report will provide the EPA and Congress with the first integrated, comprehensive, and statistically valid national report card on the health of a specific aquatic resource. Also in FY 2003, the NCA will enter the second year of coastal monitoring for Alaska. This reflects a one-year delay in initiating these efforts due in large part to the inherent logistical problems of working in Alaska and to changes in the program leadership. The Western EMAP (a.k.a. Western Pilot) study will also continue as a primary activity of EPA's monitoring research. This study has four areas of focus: 1) the landscape atlas for western states; 2) intensive study of three watersheds (Columbia River basin, Missouri River basin, and San Francisco Bay region); 3) Pacific coast monitoring; and 4) a western-wide stream survey. In FY 2003 the Western Pilot will continue with the study of streams in the western U.S., and will begin focused studies in selected estuarine and near-shore sites. These two programs will provide water resources managers with tools necessary to measure status and trends in the condition of the nation's streams and estuaries and to measure the impacts of management decisions.

EPA is also proposing to refine and extend the EMAP approach to large rivers in the Mississippi River Basin (the Central Basin). These rivers are the inland receiving waters for the majority of the nation's heartland, and are the link between small upland streams and the Gulf of Mexico. Central Basin rivers are challenged by long-term loadings of nutrients, sediments and toxic chemicals as well as extensive habitat alterations. The resulting inputs to the Gulf of Mexico are a significant contributor to causes of hypoxia, loss of wildlife habitat, and water quality concerns. At

the same time, these rivers represent a monitoring problem for the states and Tribes located in the center of the country because they are too large and complex for conventional environmental monitoring and assessment. Consequently, large rivers represent a scientific gap in our understanding of the flowing waters of the U.S. Through cooperative programs with the Regions, states, Tribes and other Federal agencies, EPA proposes to initiate a program within the Central Basin to fill remaining scientific gaps currently limiting our ability to measure the condition of large rivers. In FY 2003, EPA will expand already planned research on indicators, monitoring designs, and sampling techniques for the upper Missouri River to include the lower Missouri River and upper Mississippi River. The approaches and technology developed will be transferred to the many responsible decision-making parties within the Basin to enable coordinated, scientifically defensible, long-term monitoring of the condition of these rivers. Data from such monitoring can help inform environmental management decisions regarding these rivers, and provide support to managers in establishing total maximum daily loads and meeting water quality standards. There are important scientific linkages between the Central Basin effort and proposed watershed mitigation and management efforts. The health of these large rivers is linked to the conditions of small streams, and ultimately their watersheds. Once we are able to determine the condition of our large rivers, understanding the processes occurring in the watersheds will be important for diagnosing the causes of impaired conditions in these river systems. These approaches and technologies step off from successful efforts in the Mid-Atlantic, western U.S., and coastal regions, and will also have widespread applicability to all of the nation's large rivers.

Landscape ecology research focuses on improving estimates of the effects of land-based stressors on aquatic, estuarine, wetland, terrestrial, and landscape conditions. It also extends the EMAP probability sample design to estimate conditions of ecological resources across the West through the application of spatially-distributed models. Landscape characterization research includes: (1) planning and generating land characteristic databases for determining current conditions and change (land cover and other spatial databases); (2) continuing remote sensing research and developing high resolution imagery applications to document changes in land cover over time; and (3) quantifying relationships between landscape metrics and specific parameters. This research will significantly improve EPA ecological monitoring and assessments, as well as risk management decisions, and will reduce uncertainty in other high priority research programs.

Environmental indicators research will focus on: (1) the development of the next generation of biological indicators to characterize ecosystem condition and diagnose exposure to specific stressors; (2) their application to the monitoring of aquatic ecosystems; and (3) their interpretation in ecological risk assessments. These indicators include new condition indicators (e.g., genetic diversity of aquatic species) and new multi-metric methods (e.g., prototype indicators for deep rivers) to assess aquatic ecosystem population and community integrity.

Population genetics data are unique to ecological integrity studies, providing the only inherent measure of population fitness and sustainability which can be associated with historic or anthropogenic stresses. The research also includes the use of DNA microarray technology to develop highly specific and sensitive diagnostic indicators of exposure to chemical stressors for which no current measures of bioavailability exist (e.g., pesticides). This technology can be used to

develop methods capable of simultaneous measurement of the bioavailability of several chemical stressors to aquatic species exposed to mixtures.

Ecological Process and Modeling Research

Process and modeling research addresses biological, chemical, and physical processes affecting the condition of ecosystems and their responses 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 effectively achieve their environmental protection goals.

Since measurements are not feasible in every watershed because of cost and other practical constraints, landscape indicators offer an efficient means to detect change, measure watershed level stressors, and quantify relationships between landscape metrics and specific parameters. A new generation of wall-to-wall spatial data (e.g., Multi-Resolution Landscape Characterization (MRLC) land cover data and the North American Landscape Characterization (NALC) historical landscape data), and advances in geographic information systems (GIS) make it possible to evaluate the compositional and spatial pattern of landscape characteristics. Using this information, EPA will conduct a national assessment of landscape change between the early 1970's and early 2000's, evaluate the consequences of these changes on aquatic resources, and develop national assessments of riparian habitat conditions.

EPA will also conduct research to address the effects of excess nitrogen from atmospheric or other sources on terrestrial and aquatic ecosystems, including the development of models that predict the loading-response relationships for nitrogen in aquatic habitats and improved knowledge of the biogeochemical processes controlling nutrient processes in watersheds. Such models can be used for stressor source apportionment and for the assessment of management and mitigation strategies. In addition, deposition of nitrogen, along with other atmospheric stresses such as sulfur, will be monitored throughout the northeastern U.S. to determine the effects of acid deposition on streams, rivers, and lakes.

Other ecological process and modeling research will include the development of approaches for evaluating relative risks from chemical and nonchemical stressors on fish and wildlife populations across large areas or regions. Research in this area will improve the ability to perform retrospective (diagnostic) and prospective (forecast) assessments of risks to biota as determined by the spatial distribution of habitat quality and stressors (e.g., toxic chemicals, nutrients, disease, invasive species) in the landscape. Four major research activities include: 1) developing approaches to characterize landscapes (and water bodies) in terms of habitat quality and stressor distributions using remotely-sensed information and monitoring data; 2) developing mechanistically-based approaches for extrapolating biological response across species, chemicals, time, space, and response endpoints; 3) developing stressor-response relationships and modeling approaches for predicting population-level health as functions of habitat quality and stressor distributions; and 4)

characterizing spatial and temporal variability to distinguish between natural ranges of variability and anthropogenic impacts. This information can then be used to describe habitat requirements for wildlife and to manage watersheds to achieve and maintain desired ecological conditions, using biological indicators and metrics to determine the condition of aquatic ecosystems.

Due to the complexity of ecological systems, making scientifically sound predictions usually requires the use of numerical models, ranging in complexity from empirically based estimates to process-based simulations. Because aquatic ecosystems integrate atmospheric, landscape, groundwater, and upstream influences, models and support tools are being developed to manage, integrate, and evaluate the transport and fate of nutrients and other stressors in the environment over multiple scales. The resulting modeling framework will integrate multiple models and data sets to improve the environmental management community's ability to evaluate the impact of air quality and waste and watershed management practices on ecological and human health conditions, by embracing the watershed/airshed approach to environmental management, and building upon the latest technologies for environmental monitoring and geographic representation. It will address uncertainties in distributions of single-stressors and interactions among multiple stressors, and develop methods for incorporating uncertainty in decision-making. Given that the challenges of today's environmental problems far exceed what any one group or agency can expect to resolve, an open framework (non-proprietary) technology approach will facilitate combination of individual components developed by EPA and partners into multi-disciplinary, multi-scale modeling and assessment tools.

Ecological Assessment Research

EPA's ecological risk assessment research addresses the risk posed to ecosystems by stressors, alone and in combination, now and in the future. Ecological assessments can link stressors with consequences and evaluate the potential for damage to particular ecosystems, and can be used to compare the relative risks associated with different stressors, regional areas, and ecosystems. This valuable tool enables environmental risk managers at local, state, and Federal levels to identify priority ecosystems that are high risk.

The completion of the first phase of EMAP in the Mid-Atlantic region provided baseline information on the current status of most resources in the region. Continuing research in FY 2003 will build on EMAP and other data to project future environmental conditions in the region so that risk management activities can be targeted proactively. The Regional Vulnerability Assessment (ReVA) project, begun in FY 2000, will continue to combine modeled projections of changes in stresses (e.g., pollution deposition, land use change) with information on sensitive ecosystems in order to identify: 1) the greatest environmental risks likely to arise in the next 5-25 years and 2) where those risks are likely to occur. ReVA will also integrate socio-economics into the analyses to identify factors driving changes in environmental conditions and to better communicate trade-offs associated with alternative policy decisions. Given that we can not protect every ecosystem, everywhere, at all times, examining resources and their vulnerability on this larger scale will greatly assist in identifying ecologically important features of the region meriting special consideration by local, regional, or national managers.

Ecosystem Restoration Research

EPA's risk management and restoration research focuses on the options available to manage the risks to, and restoration of, degraded ecosystems. The growth rate of the man-made environment necessitates the development of cost-effective prevention, control, and remediation approaches for sources of stressors and adaptation approaches for ecosystems. These technologies will diagnose ecosystem restoration needs, evaluate progress toward restoration, and establish ecologically relevant goals and decision support systems for state and community planners. EPA is developing integrated restoration technologies which focus on: 1) rehabilitation, to the extent possible, of the structure of watershed ecosystems (e.g., restoring riparian zones); 2) reduction of the perceived stressors (e.g., cleaning up contaminated sediments); and 3) enhancing the natural resilience of the system. EPA will also develop tools to assess the progress, effectiveness, and cost of candidate restoration technologies, including the development of methods for evaluating negative or unexpected impacts of the restoration technology. This research will be incorporated into restoration protocols to allow more uniform approaches to determining effectiveness and cost.

FY 2003 Change from FY 2002 Enacted

S&T

- (+$4,875,000) This initiative refines and extends the EMAP approach to large rivers in the Mississippi River Basin (the Central Basin). Through cooperative programs with the Regions, states, Tribes and other Federal agencies in the Central Basin, EPA proposes to fill remaining scientific gaps (indicators, sampling design, and sampling methodology) currently limiting our ability to measure the condition of large rivers. EPA will use this information, along with that provided by other agencies, to develop future baseline assessments of Central Basin rivers. In FY 2003, EPA will expand already planned research on indicators, monitoring designs, and sampling techniques for the upper Missouri river to include the lower Missouri and upper Mississippi rivers. The approaches and technologies developed will be transferred to the many responsible parties within the Central Basin to enable coordinated, scientifically defensible, long-term monitoring. Data from such monitoring can help inform environmental management decisions regarding these rivers, and provide support to managers in the establishment of total maximum daily loads and meeting of water quality standards. These approaches and technologies build on successful efforts in the Mid-Atlantic, western U.S., and coastal regions, and will also have widespread applicability to all of the Nation's large rivers.

- (+$282,200, +1.5 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.

- (-$500,000) This is a modest reduction to work on core diagnostic and predictive tools for watershed assessment and restoration that will result in a minor slowing in this work.

Resources are being shifted to high priority research on the evaluation of public health outcomes in Goal 8, Objective 2.

- (-$7,770,900) The FY 2003 Request is $7,770,900 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process that are not included in the FY 2003 President's Request.

GOAL: SOUND SCIENCE, IMPROVED UNDERSTANDING OF ENV. RISK AND GREATER INNOVATION TO ADDRESS ENV. PROBLEMS

OBJECTIVE: CONDUCT RESEARCH FOR ECOSYSTEM ASSESSMENT AND RESTORATION.

Annual Performance Goals and Measures

Research

Estuarine Ecosystem Conditions

In 2003 Provide the public with a reliable and statistically valid baseline for the condition of the Nation's estuaries against which to measure the success of ecosystem protection and risk management practices

In 2001 Baseline conditions in the ecological condition of the Nation's estuaries have been established from which changes and ultimately trends can be evaluated at regional scales.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Report describing the condition of the Nation's Estuaries	1			report
Report on the condition of Nation's estuaries based on a statistically valid sampling design so that data is comparable across the Nation			1	report

Baseline: The coastal monitoring strategy responds to the needs of EPA and the coastal states and tribes for information on the health of the coastal environment that will inform decisions to protect these vital coastal resources For the past decade, ORDs Environmental Monitoring and Assessment Program (EMAP) has been working with federal, state, and academic scientists to develop the most cost-effective methods for measuring the physical, chemical, biological, and ecological conditions of coastal waters, bays, estuaries, beaches, and coastal wetlands The data from this decade of EMAP research and field surveys in select areas of the country were combined with select data from EPA (ORD and OW), NOAA, Department of Interior, and Department of Agriculture to form an assessment of estuarine condition in 2001 Because of the need to determine current environmental health baselines and quantitatively measure improvement for GPRA, EPA developed an initiative that would implement the proven science developed by EMAP for the ecosystems found throughout the US coastal waters. Starting in 2000, survey information has been collected on the condition of estuarine resources, and the kinds of problems associated with them, in each conterminous coastal state and in Puerto Rico. In 2003, these data will be compiled for the first comprehensive National Coastal Assessment of estuarine condition in the contiguous U.S This report also will compare the condition of estuaries in the period 1990-1997 to the period 2000-2001 For the first time, this will provide the public with a reliable picture of the current and changing condition of the Nations estuaries and coastal waters with known confidence, and using consistent measurements

Integrated Ecosystem Modeling

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

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Trends in acidity in lakes and streams in the NE and Mid Atlantic Regions of the U S		1		report

Baseline. In response to the Clean Air Act amendments, actions were taken to reduce the causes of acid deposition and aid in the recovery of

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

Verification and Validation of Performance Measures

Performance Measure (PM): Report on the Condition of the Nation's estuaries.

Performance Database: Program output, no internal tracking system

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Coordination with Other Agencies

Research in ecosystems protection is coordinated government-wide through the Committee on Environment and Natural Resources (CENR). It is the unique mission of EPA to look beyond specific resource management responsibilities such as those assigned to other agencies like the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service, U.S. Department of Agriculture's (USDA) Forest Service, and the Department of the Interior's (DOI) Fish and Wildlife Service (USFW) and Bureau of Land Management, and to protect the whole environment, accounting for both public and private sources of adverse ecological effects. EPA has been an active participant in the CENR, and all work in this objective is fully consistent and complementary with other Committee member activities.

EPA researchers work within the CENR on EMAP and other ecosystems protection research. The Mid-Atlantic Landscape Atlas was developed in cooperation with NOAA, USFW, the University of Tennessee, and the U.S. Department of Energy's (DOE's) Oak Ridge National Laboratory. Development of the Multimedia Integrated Modeling System is coordinated with the Army Corps of Engineers (USACE), USDA, and DOE. EPA cooperates with the CENR's Subcommittee on Ecological Systems, in the restoration of habitats and species, impacts of landscape change, invasive species and inventory and monitoring programs.

EPA is working through interagency agreements with the USACE on the development of tools for the management of stressors in reservoir and lake watersheds and the establishment of an approach for the development of decision support systems to manage these types of ecosystems. Through interagency agreements with the U.S. DOI's U.S. Geological Survey (USGS), EPA has worked to investigate and develop tools for assessing the impact of hydrogeology on riparian restoration efforts. This work also focuses on development of tools for the dispersal modeling of invasive species, the evaluation of the effectiveness of restoration efforts to reconnect groundwater and surface water hydrology, and the establishment of zones of denitrification within impaired streams. The collaborative work with the USGS continues to play a vital role in investigating the impact and fate of atmospheric loadings of nitrogen and nitrogen applications as part of restoration technologies on terrestrial and aquatic ecosystems. All of these efforts have significant implications for risk management in watersheds, total maximum daily load (TMDL) implementation, and management of non-point source pollutants.

Additional interagency grants programs in Ecology include: the Ecology and Oceanography of Harmful Algal Blooms (EcoHAB) program with NOAA, NSF, DOD, and NASA; nutrient science for watershed management with USDA; and the Estuarine and Great Lakes (EAGLES) program with NASA.

Statutory Authorities

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

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

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Improve Scientific Basis to Manage Environmental Hazards and Exposures.	**$52,407.6**	**$53,021.7**	**$56,355.0**	**$3,333.3**
Environmental Program & Management	$3,896.6	$3,118.4	$2,937.3	($181.1)
Science & Technology	$48,511 0	$49,903.3	$53,417 7	$3,514.4
Total Workyears	163.4	175.8	176.0	0.2

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Administrative Services	$70.1	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$0.0	$731.3	$0.0	($731.3)
Endocrine Disruptor Research	$366.9	$369 3	$372 2	$2.9
Facilities Infrastructure and Operations	$3,370.9	$2,656.7	$2,505.1	($151.6)
Homeland Security	$0 0	$360 1	$0.0	($360.1)
Human Health Research	$49,825.7	$47.225.6	$51,824.5	$4,598 9
Legal Services	$41.9	$51.0	$54.8	$3.8
Management Services and Stewardship	$459.0	$410.7	$377.4	($33 3)
Research to Support FQPA	$1,214.5	$1,217.0	$1,221.0	$4.0

FY 2003 Request

EPA's human health research program is based on the assumption that major uncertainties in risk assessment can be reduced by understanding the fundamental determinants of exposure and dose and the basic biological changes that result from one or more exposures to one or more chemicals. Historically, EPA focused its human health risk management decisions and regulations on single environmental pathways and individual contaminants. Often, environmental legislation mandated this approach. In recent years, however, 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 contemplated by early environmental statutes.

EPA's draft *Human Health Research Strategy* outlines the approaches the Agency will use over the next 5-10 years to provide the science and scientific leadership needed to characterize and enable the prevention and reduction of environmental risks to public health. Under the draft strategy, EPA will conduct research needed to address complex environmental issues, such as harmonization of cancer and non-cancer risk assessments, susceptible subpopulations, aggregate and cumulative risk, susceptibility resulting from age, developmental stage, gender, preexisting disease, etc., and the evaluation of health-driven regulatory decisions.

In FY 2003, human health research will be undertaken in four key areas: 1) development of multimedia/multipathway exposure methods, data, and models; 2) development of mechanistically-based data, tools, and approaches; 3) development and verification of innovative methods and models for assessing risks to susceptible subpopulations; and 4) development of tools to enable evaluation of public health outcomes.

Multimedia/multipathway exposure methods and models

EPA is committed to filling critical data gaps that reduce the risk assessor's reliance on default assumptions and improves the risk assessment process. One key way to accomplish this goal is by developing models to assess, predict, and diagnose the population's distribution of multimedia/multipathway exposures to major classes of environmental agents. Research activities in this area will address substantial uncertainties that exist in human health risk assessment and thereby improve the scientific basis for assessing and managing risks. Activities include: 1) human exposure measurement and modeling research, including source emission modeling; 2) research on aggregate and cumulative exposures, including mixtures; 3) an exposure study to examine the key factors influencing young children's exposures; 4) continued research supporting the National Human Exposure Assessment Survey (NHEXAS); and 5) research in support of the US/Mexico Border Program, the National Children's Study, and other relevant exposure programs.

Through the exposure research program, EPA will develop methods, measurement data, and measurement-derived models that estimate source emission, aggregate and cumulative exposures and source-exposure-dose relationships for contaminant mixtures to which the general population, children, and other susceptible populations are exposed daily. Research will continue to focus on developing, evaluating, and enhancing multimedia, multi-pathway exposure modeling modules

incorporating human activity patterns and measured or modeled distributions of exposure concentrations. These modules are key devices for linking environmental concentrations with human actions to estimate real-world exposures. Another focus will be on human exposure-to-dose modeling, including developing state-of-the-art exposure-dose mathematical models, to describe the uptake of pollutants into the body and the distribution of pollutants throughout the body These human exposure-to-dose models provide the essential linkage between regional environmental or micro-environmental models and the corresponding dose-response models designed by toxicologists.

In addition, the Agency will continue to develop measurements, methods, models, and activity pattern data essential for eliminating critical gaps in our knowledge about children's aggregate and cumulative exposures to environmental contaminants. This research will provide information and data needed to characterize children's age-related and developmental stage factors of exposure. These children's exposure data will also be used to verify and update the aggregate and cumulative exposure source-to-dose models. The ultimate result of this research is to produce distributions of high quality children's, other susceptibles', and the general population's exposure and exposure factor data that will reduce the risk assessor's reliance on default assumptions.

Along with the current program designed to address aggregate and cumulative risks, in FY 2003 the Agency is proposing increased efforts to more comprehensively address these areas. This research is intended to complement and build on EPA's draft *Human Health Research Strategy*. These efforts will provide a focal point for Agency-wide strategic research planning and methods development and will address a broader array of issues than can be addressed within EPA's current human health research program. New research will address: 1) the timing of exposures and its influence on health effects; 2) methods for predicting the relative toxicity of mixture components; 3) the development of biological markers that can quantify exposure, effects and susceptibility; and 4) the use of the biological data and information on biological mechanisms and mode of action to assess cumulative risk.

EPA also conducts methods, measurement, and modeling research through the NHEXAS program, which integrates measurements and modeling to investigate critical information gaps about population-scale distributions of exposures to contaminant mixtures. In FY 2003, the Agency will continue to implement the NHEXAS strategic data analysis plan. The NHEXAS data provide fundamental input to the Agency and the scientific community for the development of aggregate exposure models, and assessments, and the evaluation of risk management/mitigation strategies. Building on basic analyses initiated in FY 2001, research will include more detailed/complex analyses, such as characterization of variance components, evaluation of spatial variability of exposures, construction of empirical exposure distribution models, and development of aggregate exposure assessments.

A major children's exposure field study will begin in FY 2003, which focuses on young children's aggregate exposure to pesticides in homes, day care centers and schools (this research is being leveraged with similar research programs within Goal 3, Safe Food). This field study will develop essential information for improving models that represent dermal uptake and exposure, dietary exposure and gastrointestinal (GI) uptake, and aggregate exposure. The validated children's

exposure protocol will be used by researchers within EPA, the scientific community, and by the pesticide and chemical industry to conduct future children's exposure studies and develop high quality data on exposure and exposure factors mandated by the Food Quality Protection Act (FQPA). The study will be completed in FY 2004 with delivery of major products (e.g., a validated protocol, a technical publication outlining the distributions of exposures by age and distribution of key exposure factors, an updated Exposure Factors Handbook, etc.) in FY 2005.

In the risk assessment area, research on mixtures, cumulative and aggregate exposures and cumulative and aggregate risks will continue to provide methodologies, prototypical assessments, and guidance for risk assessors. This information will be used to address key research issues in the areas of multiple sources, multiple chemicals and stressors, multiple routes and pathways, and multiple time frames and durations of exposure. Research highlights include: 1) identifying the most effective multiple source models for EPA risk assessments and demonstrating their use in risk assessments; 2) developing methods for predicting interactions in mixtures and applying them to risk assessments; 3) developing and validating methods for identifying and characterizing exposure levels associated with multiple pathways; and 4) developing guidance for which average exposure times are most appropriate for various health effects.

Mechanistically-based Data, Tools, and Approaches

There is a lack of understanding about the underlying biological, chemical, and physical processes that determine target tissue exposures and effects, which limits the Agency's ability to assess potential health risks of environmental exposures - qualitatively and quantitatively. Insufficient knowledge of these processes introduces uncertainties into the risk assessment process that may allow for wide interpretation of what is often limited data. Research in this area addresses both qualitative (hazard identification) and quantitative (dose-response analysis) concerns associated with current risk assessments.

In order to reduce uncertainties in the risk assessment process, health effects research will continue to focus on harmonization of risk assessment approaches and chemical mixtures. Work to harmonize risk assessment approaches will yield a consistent set of principles and guidelines for drawing inferences from scientific information, including the need for consistent application of all pertinent information on toxicity, dosimetry, and mode of action in all risk assessments. Research on chemicals in mixtures will focus on determining the risks associated with exposure to chemicals at the low end of the dose-response curve. It is particularly important to develop principles for how chemicals interact at low doses and to determine the conditions under which they may respond in a non-additive manner. The primary approach is to study chemicals having similar modes of action. Also, principles derived from mixtures research will address issues associated with the assessment of cumulative risk and aggregate exposure, as mandated by the FQPA.

Research will continue also to develop and improve risk assessment methodologies, conduct prototype risk assessments, and develop risk assessment guidelines and databases. More specifically, results of research on biological mechanisms will be used to improve understanding of and resolve uncertainties in dose-response assessments.

Susceptible Subpopulations

EPA is committed to developing and verifying innovative methods and models for assessing the susceptibilities of populations to environmental agents and enhancing current risk assessment and risk management strategies and guidance.

In FY 2003, EPA's Children's Health Research Program, established in 1997 in response to the heightened awareness and concern about the unique susceptibilities of infants and children, will continue to play a critical role in shaping how the Agency addresses children's health issues. Children may be more susceptible than adults to adverse effects because of differences in how chemicals are absorbed, metabolized, and stored in the body, resulting in higher doses over a longer period of time and greater harm to key organs and organ systems. In addition to inherent differences in susceptibility, children are often more vulnerable to toxic exposures because of their different diets, proportionally higher food intake, and child-specific behaviors, such as playing on floors, that result in greater contact with environmental contaminants.

Much of the effort under the Children's Health Research Program in FY 2003 is based on the *EPA Strategy for Research on Environmental Risks to Children* (in addition to the draft *Asthma Research Strategy*), which provides direction for research in age-related exposures, physiology, and biological responses that may result in increased risks, and research in risk reduction methods. This research provides the scientific underpinnings that will result in better EPA risk assessments for children and ultimately reduced risks from potential environmental health threats.

The Agency will also continue to address environmental-related childhood disease via the Children's Environmental Research Centers. The aim of these grants is to better understand the causes of environmentally induced disease among children and to eventually decrease the prevalence of childhood disease. Efforts will focus on childhood asthma and other respiratory diseases, growth and development, and children's exposure and susceptibility to pesticides. The Centers are also investigating community-based risk reduction methods to lower children's exposures to environmental agents and improve their health outcomes.

Health effects research in the area of susceptible subpopulations will develop the scientific basis for understanding the pharmacodynamic and pharmacokinetic differences between subpopulations that could account for different sensitivity and susceptibility following exposure to environmental chemicals. Results from this research will be used to develop better risk assessment methods for evaluating selected subpopulations that focus on the influence of life-stage, genetic predisposition, and health status on responsiveness to chemical exposure.

The Agency is participating in the National Children's Study (NCS) through a Federal Interagency Committee with the National Institute for Child Health and Human Development (NICHD), the Centers for Disease Control and Prevention (CDC), and other agencies, as mandated in the Children's Health Act of 2000. The NCS will enroll parents and children at or before birth and follow them for a number of years, documenting developmental disorders and collecting data on

environmental exposures and other factors that could be responsible for adverse outcomes. In 2003, EPA will continue to work on design and implementation of the NCS and to develop and pilot methods for measuring exposure to environmental agents and adverse health outcomes.

Because of the rising rate of asthma in the United States, especially among children, and the scientific uncertainty as to why asthma rates are increasing, the Agency developed an *Asthma Research Strategy*. Consistent with the priorities laid out in the Strategy, EPA will focus its efforts on interactions between aldehyde exposure and allergic asthma, including extrapolation between rats and humans, and asthma and exposure of children to fungi. EPA is also developing methods and protocols for asthma research, as part of the National Children's Study (NCS), to enable evaluation of the role of environmental factors in the induction and exacerbation of asthma (and to assess the effectiveness of interventions).

The Agency will continue to support risk management research designed to assist schools in their efforts to eliminate or minimize emissions and releases of contaminants from products and materials they use that contribute to asthma and other respiratory irritations. This research will develop models and test procedures, and create market incentives for the manufacture and use of products, including water-based cleaners, that result in improved indoor air quality. Research results will provide the scientific basis to upgrade indoor air quality guidance to schools.

EPA will also conduct research on the influence of genetic factors on responsiveness to environmental chemicals. An important scientific question in this area is whether genetic differences are sufficient to influence risk assessment. In addition, the Agency will study whether the presence of pre-existing diseases may alter the response to environmental toxins. Data derived from these studies will be used to assess the possible increased risk of chemical exposure for individuals with pre-existing diseases, such as asthma and other respiratory diseases.

Research to Enable Evaluation of Public Health Outcomes

As part of its regulatory development process, the Agency often estimates the public health benefits, such as reduced incidences of disease and extended life years, of various possible Agency decisions. Estimating the public health benefits of Agency decisions, or in a more general sense evaluating public health outcomes from risk management actions, is most often prospective in nature. Generally, the Agency has not prepared retrospective evaluations to assess whether the intended benefits in protecting public health were realized once an Agency decision had been in effect for a period of time.

In FY 2003, EPA will begin the first in a series of solicitations requesting research to develop approaches for using human health and exposure data to evaluate the effectiveness of environmental decision-making on public health. Research will be conducted using case studies to evaluate approaches for using health-related information to evaluate the public health outcomes of regulatory decisions. The studies will test statistical and computational approaches and methods for evaluating cost-benefit relationships.

FY 2003 Change from the FY 2002 Enacted

Research

S&T

- (+$3,412,500) This increase supports the Agency's research initiative on aggregate and cumulative risks. Research results will provide a focal point for Agency-wide strategic research planning and methods development; provide tools that can be applied to address key concerns that have arisen in settings where population-based human health risk assessment is the focus; and complement and build on EPA's human health research. This initiative has been specifically tailored to reduce uncertainty in this area and allow the Agency to address a broader array of issues than is currently possible. New research will address temporal variation in exposures and its influence on health effects, methods for predicting the relative toxicity of mixture components, the development of biological markers that can quantify exposure, effects and susceptibility, and the use of the biological data and information on biological mechanisms and mode of action to assess cumulative risk.

- (+$2,450,000) Resources will be redirected within this objective to enhance the Agency's efforts in the area of computational toxicology. EPA seeks to strengthen further and integrate its capabilities in the areas of (but not limited to) molecular profiling and bioinformatics. The Agency's goal is to advance its ability to assess and predict the human health and ecological risks from environmental exposures.

- (-$2,000,000) Resources will be redirected within this objective from efforts in human health in the areas of human health risk assessment and assessing exposure and risks from chemical mixtures. There are no programmatic impacts.

- (+$500,000) Resources will be used to enhance EPA's efforts in evaluating the effectiveness of environmental decision-making on public health. Research will be conducted using case studies to evaluate approaches for using health related information to evaluate the public health outcomes of regulatory decisions. The studies will test statistical and computational approaches and methods for evaluating cost-benefit relationships.

- (+$360,900, +1.9 FTE) Resources will be redirected within the Objective to develop methods, data, and measurement-derived models that estimate aggregate exposure and source-exposure-dose relationships for contaminant mixtures. Planned research related to Homeland Security will conclude in FY 2002.

- (-$360,900, -1.9 FTE) Planned research related to Homeland Security in the area of model development incorporating human activity patterns and measured or modeled distributions of exposure concentrations will conclude in FY 2002. Resources will be redirected to aggregate and cumulative exposures and exposures to mixtures.

- (+$281,200, +1.5 FTE) This increase in resources will be used to coordinate EPA scientific participation in regulatory development with program offices on major rules.

- (-$786,000) This FY 2003 reduction eliminates funding for FY 2002 Congressionally-directed research.

- (-$731,300) The FY 2003 Request is $731,300 below the 2002 Enacted budget due to the Congressional Earmarks received during the appropriations process which are not included in the FY 2003 President's Request.

Annual Performance Goals and Measures

Research

Human Health Risk Assessment Research

In 2003 Develop, summarize, integrate, and demonstrate an initial set of tools (methods, measurements, models) so EPA can assess aggregate exposures and risks from environmental contaminants in multiple media and determine how to best minimize/eliminate human and environmental harm from these contaminants

In 2002 Produce a framework with supporting models and analyses to better link human exposure measurements and health effects outcomes and address complex, high priority risk issues including aggregate/cumulative risk and high to low dose extrapolation

In 2001 EPA developed a draft research strategy on human health risk assessment Although publication has been delayed until FY 2002, the fundamentals of this strategy are being implemented into an analysis of data from the National Human Exposure Assessment Survey (NHEXAS)

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Publish peer reviewed research strategy on human health risk assessment	0			resrch strategy
NHEXAS. Begin implementation of Strategic Data Analysis Plan	1			strategic plan
Develop a prototype source-to-exposure-to-dose modeling framework that enables the complex computation for human exposure modeling		1		model assessmen
Advance the human exposure and dose model by improving the modules for dermal and dietary exposure		2		modules
External review draft report on framework for conducting risk assessments for children as a sensitive subpopulation		1		framework
Report on the Contribution of Genetic Polymorphisms of Metabolic Pathways to Susceptibility and Population Variance		1		report
Report on health effects associated with exposures to indoor and outdoor pollutants using NHANES health effects data and EPA monitoring data		1		report
Provide access to human exposure data via the world wide web to states, Regions, Program Offices, exposure modelers, and other stakeholders for use in aggregate and cumulative risk assessments.			1	data base
Test and evaluate a framework for modeling aggregate exposures from source through human exposure to human dose			1	model
Publish data and results from the National Human Exposure			1	report

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Analysis Survey (NHEXAS) that will help characterize exposures to key pollutants and summarize human activities that impact exposure				
Analyze NHEXAS data for use in updating the Exposure Factors Handbook			1	analysis

Baseline: Currently, risk assessments often focuses on a small component of the total exposure and risk that people face Aggregate exposure and risk expands that consideration to include all the pathways and routes by which people come into contact with pollutants. It is a first step in understanding the cumulative total of peoples exposures and risks A variety of tools (measurement and analysis methods, measurement studies and data, and human exposure/risk models) are currently under development to allow estimation of aggregate exposures and risks In FY03, research will provide: improved information on sources of exposure, analysis of actual aggregate exposures of people in the U S as observed in probabilistic exposure measurement studies, development and demonstration of models for describing the many ways pollutants move from sources to exposures to human dose, and the gathering together and publication of information and techniques needed to assess aggregate exposures and risk for use by the scientific community, risk assessors, and the public. Providing tools to assess aggregate exposure and risk is an initial step in understanding cumulative exposures and risks, and helping us move to more outcome-oriented measures of Agency actions to protect human health.

Coordination with Other Federal Agencies

Research

Several Federal agencies sponsor research on variability and susceptibility in risks from exposure to environmental contaminants. EPA has collaborated with the National Institute of Environmental Health Sciences (NIEHS) in establishing Centers for Children's Environmental Health and Disease Prevention to define the environmental influences on asthma and other respiratory diseases, childhood learning, and growth and development.

EPA is participating with the Centers for Disease Control and Prevention (CDC), through its National Center for Health Statistics (NCHS), in the National Health and Nutrition Examination Survey (NHANES)-4. NHANES-4 is a national population-based survey and includes data (i.e., children's exposure to pesticides and other environmental contaminants) on potentially sensitive subpopulations such as children and the elderly.

The National Institute of Child Health and Human Development (NICHD) is the lead agency for conducting the National Children's Study (NCS) of environmental influences on children's health and development. EPA serves as one of the lead agencies within a consortium of Federal agencies that are planning, developing and implementing the NCS.

The Agency continues to work on interagency task forces with a number of Federal agencies, - including the National Institute for Occupational Safety and Health (NIOSH), NIEHS, and Food and Drug Administration (FDA) - in developing health risk assessment guidelines (e.g., Carcinogen Risk Assessment Guidelines, Developmental Toxicity Guidelines, Exposure Assessment Guidelines) and has maintained interagency agreements with several Federal agencies (e.g., NIEHS) to support the Children Environmental Research Centers.

Statutory Authority

Research

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

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Enhance Capabilities to Respond to Future Environmental Developments.

Enhance EPA's capabilities to anticipate, understand, and respond to future environmental developments; conduct research in areas that combine human health and ecological considerations; and enhance the Agency's capacity to evaluate the economic costs and benefits and other social impacts of environmental policies.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Enhance Capabilities to Respond to Future Environmental Developments.	**$48,626.6**	**$64,249.5**	**$50,965.8**	**($13,283.7)**
Environmental Program & Management	$6,801.4	$10,147.8	$10,008.5	($139.3)
Science & Technology	$41,825.2	$54,101.7	$40,957.3	($13,144.4)
Total Workyears	159.6	152.6	152.6	0.0

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$133.9	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$4,377.8	$3,753.8	$0.0	($3,753.8)
Endocrine Disruptor Research	$12,482.5	$10,353.1	$11,806.5	$1,453.4
Facilities Infrastructure and Operations	$371.4	$2,267.8	$2,177.2	($90.6)
Homeland Security	$0.0	$1,587.6	$0.0	($1,587.6)
Management Services and Stewardship	$426.6	$327.7	$299.1	($28.6)
Regulatory Development	$6,857.6	$7,552.3	$7,532.2	($20.1)
Research to Support Emerging Issues	$23,365.6	$28,658.5	$29,150.8	$492.3
STAR Fellowships Program	$9,704.3	$9,748.7	$0.0	($9,748.7)

FY 2003 Request

Research conducted under this objective endeavors to develop common methodologies for combined human health and ecological risk assessments and reliable approaches for risk management, and to conduct research in social science, environmental decision making, economic calculation, and estimation of environmental costs, risks and benefits. This research provides decision-makers at all levels with the integrated view of risk and risk reduction benefits and costs needed to make sound decisions.

Endocrine Disruptors

Evidence has been accumulating that indicates humans and animals, both domestic and wild, have suffered adverse health consequences resulting from exposure to endocrine disrupting chemicals (EDCs). Reports of declines in the quality and quantity of human sperm production over the last four decades, and increases in certain cancers that may have an endocrine-related basis (breast, prostate, testicular), have led to speculation about environmental causes. Recognizing the potential scope of the problem, the possibility of serious health effects on populations, and the persistence of some EDCs in the environment, EPA published a "Research Plan for Endocrine Disruptors" (www.epa.gov/ORD/WebPubs/final) in 1998. Endocrine disruptors research will continue to focus on the priorities established in the 1998 plan by developing tools to identify hazards, characterize the extent of human and wildlife exposures to known and suspected EDCs, and manage risks from exposure to EDCs. This research focuses on: 1) developing a better understanding of EDCs; 2) determining the extent of the problem in human and wildlife populations; and 3) supporting EPA's screening and testing program mandated under the Food Quality Protection Act of 1996 and the Safe Drinking Water Act Amendments of 1996. In FY 2003, EPA will continue to: develop state-of-the-art methods and conduct studies in laboratory species, ecological systems, and human populations with suspected contamination or exposure; develop physiologically-based pharmacokinetic (PBPK) and biologically-based dose-response (BBDR) models; identify major sources of EDCs entering the environment; and develop tools for risk assessment and risk management.

As in the past, EDC-related work will be organized along an integrated pathway of effects, exposure, risk assessment, and risk management research. Effects research is needed to determine the nature and extent of adverse effects in humans and wildlife caused by exposure to EDCs. Efforts in this area will focus on: 1) developing and standardizing protocols for the Agency's screening and testing program to identify endocrine disrupting chemicals; 2) determining the unique relationship between developmental exposures (e.g., prenatal and early postnatal) and the onset and severity of adverse health outcomes later in life (adulthood); and 3) determining the degree to which the effects of EDCs can be extrapolated across species.

Exposure research is needed to characterize the key factors contributing to how, when, and where EDC exposures occur and their magnitude. Efforts will focus on: 1) developing analytical and measurement tools for characterizing and quantifying EDC exposures; and 2) planning and conducting exposure studies to better define the spatial and temporal variability of real-world EDC exposures.

Assessment work will result in the development of an analytical framework and guidelines for evaluating health and ecological impacts of reported endocrine disruptors. To achieve this, risk assessment research will: 1) identify key risk assessment issues for evaluating endocrine disruptors; 2) identify methods to adequately evaluate data on the effects of EDCs on human health and the environment; 3) develop a framework that supports proper assessment of EDCs; and 4) develop and document guidance, incorporating this framework, for assessing EDCs.

Risk management research will identify current EDC releases that can be mitigated or eliminated by existing risk management tools and will develop new tools to manage current and future EDC risks. Initial efforts will focus on the following sources of exposure: 1) combustion, 2) confined animal feeding operations, 3) drinking water treatment, 4) contaminated sediments, and 5) waste water treatment.

Pharmaceutical and Personal Care Products

Pharmaceutical and personal care products (PPCPs) are used throughout the world in quantities on a par with agricultural chemicals, and represent a growing area of concern to the scientific community. PPCPs comprise very large, broad, and diverse classes of often highly bioactive and potentially endocrine disrupting chemicals. In contrast to agricultural chemicals, most of these products are disposed of, or discharged, into the environment on a continual basis via domestic/industrial sewage systems and wet-weather runoff. The occurrence, fate, and effects (both ecological and human) of PPCPs in the environment are poorly defined. Research will focus on: 1) framing initial risk assessments that will help chart the focus of future work; 2) developing requisite analytical methods for target PPCPs; 3) initiating small-scale proof-of-concept and early warning environmental monitoring; 4) promoting scientific dialogue at national and international levels; 5) and communicating knowledge to the public.

Mercury

Mercury is released from a variety of sources, exhibits complicated biogeochemistry, and proceeds via several different pathways to humans and wildlife. After release, mercury undergoes complicated transformations and speciation changes that can result in highly toxic methylmercury, an organic form of mercury. Methylmercury bioaccumulates in fish and animal tissue, and human exposure to methylmercury has been associated with serious neurological and developmental effects. Because it is persistent and because of the risks of neurological and reproductive problems for humans and wildlife, it is a pollutant of considerable human health and environmental concern.

Since the developing nervous system is more vulnerable to mercury toxicity, children exposed to methylmercury through their mother's consumption of fish, and individuals who eat large amounts of fish from local waters, can be particularly at risk of adverse effects. The presence of mercury in freshwater fish higher in the food chain is the most frequent basis for fish advisories. Almost 79 percent of all advisories in the United States are at least partly due to mercury contamination in fish and shellfish. As of December 2000, mercury was the chemical contaminant responsible, at least in part, for the issuance of 2,242 fish consumption advisories by 41 states, in one

or more water bodies; 13 states have issued statewide mercury advisories.

Several research issues will continue to be emphasized in FY 2003, including: 1) measurement methods, continuous emissions monitoring, and control technologies for combustion sources of mercury; 2) source characterization and cataloguing from non-combustion sources; 3) atmospheric, aquatic, and terrestrial transport, transformation, and fate of mercury; 4) ecological/environmental effects assessment of mercury; 5) mercury risk communication strategies (especially to sensitive subpopulations); 6) disposal of excess mercury stocks and improved management of mercury wastes; 7) studies of options for controlling mercury releases from contaminated media (e.g., sediments and landfills); and 8) studies of performance, cost, and residue of mercury control technologies, including methods for reducing emissions from coal fire utility boilers. Research in FY 2003 will provide data on measurement methods and control technology performance, cost, and residues that can be used to make informed choices on reducing the risks associated with mercury and methylmercury. EPA will place increased emphasis on research related to atmospheric chemistry, transport modeling and ecological assessment. FY 2003 research will also focus on the atmospheric transport, transformation, and fate from source to deposition point. Studies will focus on the Arctic depletion event and the mechanisms that transform elemental mercury to the reactive gaseous form in the upper atmosphere. Additional research will support the development of a watershed biogeochemical model for aquatic exposures in response to atmospheric deposition and within-watershed sources. This model will be used to evaluate the impacts of internal cycling versus long-range transport and the responses of fish concentrations to mitigation measures, and will have potential applications for development of mercury total maximum daily loads (TMDLs).

Socio-Economic Research

Effective accomplishment of EPA's mission depends on understanding not only the physical and biological effects of environmental changes, but also the behavioral causes and consequences of those changes. The focus of socio-economic research at EPA is to develop a better basis for making decisions using sound assessments of human behavior that affect environmental outcomes. Priority socio-economic research identified by EPA economists and outside experts includes: ecosystem and human health benefits valuation; decision-making processes that incorporate non-market benefits; value of information; corporate environmental behavior and the effectiveness of government interventions; and effective group or community decision-making.

Research conducted in FY 2003 will enhance environmental decision-making by improving the understanding of how people value the environment, and will focus on difficult valuation issues of critical concern to environmental decision makers as they evaluate the justification for environmental policy initiatives. This is particularly important to regulatory programs that must conduct cost-benefit analyses. Ecosystem valuation is one of the top research priorities for Agency rule development due to extensive gaps in the information we have about biodiversity, habitat, wildlife, and different ecosystem states. Research on market mechanisms and incentives will support investigations that explore the conditions under which financial and other performance incentives will achieve environmental objectives (e.g., pollution reduction, habitat preservation) at a lower cost or more effectively than traditional regulatory approaches. This research will also help

Federal and state agencies understand how regulated entities respond to the incentives for environmental compliance offered through enforcement, compliance assistance, and information and voluntary mechanisms.

Exploratory Grants and Minority Programs

A blue ribbon panel of the Science Advisory Board recommended in 1994 that EPA enhance its environmental education programs for training the next generation of scientists and engineers.

In FY 2003, the Exploratory Grants research program will publish an annual general solicitation to promote research in areas where significant gaps in scientific knowledge and understanding exist. This program provides opportunities for individual investigators from the academic research community to conceive, define, and propose research projects. Topics from a broad variety of areas, such as environmental chemistry and physics, health and ecological effects of pollution, and nanotechnology can be addressed under the Exploratory Grants program. The proposals are competitively reviewed by panels of non-EPA researchers, with only the most scientifically sound proposals ultimately receiving support. The major program outputs are scientific articles published in peer-reviewed literature; these publications are intended to enhance scientific knowledge and understanding, and to be used as the basis for more targeted, applied environmental research programs.

EPA will also direct special grant solicitations to support research at Minority Institutions. This program specifically assists minority institutions in establishing and supporting environmental research activities that would build capacity to assess and solve environmental problems. A broad range of research in risk assessment and risk management will be supported at these institutions.

Improve Economic Information and Methods

In addition to the developments in risk assessment, EPA will continue to improve the economic information and methods available for use in the Agency's regulatory and policy analyses. In 2003, the Agency will invest in new economic research and analyses to improve measures of the benefits and costs of EPA programs. EPA will conduct economic analyses of emerging issues and provide economic analyses to fill key gaps in the Agency's ability to quantify the benefits of environmental regulations. Economic valuation studies will be undertaken to quantify human health and ecological benefits from air, water and waste management programs. EPA will continue to convene economic research and policy workshops, bringing economists together to explore important topics, such as economic valuation of reduced risks to children, use of market-based approaches to environmental management, the economics of emerging environmental policies (e.g., bioenergy and genetically modified organisms), and the measurement of values from reduced mortality risks. EPA will continue to analyze the environmental impacts from changes in economic markets associated with new international trade policies and proposals. EPA will continue to engage the Science Advisory Board on new research and analytical methods being considered by EPA to assess and manage environmental risks. Also, EPA and the National Science Foundation will continue to support a series of new economic research solicitations directed at such priorities as

valuation of health benefits, market-based mechanisms and economic incentives, and corporate environmental performance and the effectiveness of government intervention.

FY 2003 Change from FY 2002 Enacted

S&T

- (+$1,152,700) This represents a realignment of Minority Programs from the Superfund appropriation (in Objective 5.1) into the Science and Technology appropriation (in Objective 8.3). This will enhance the program by allowing for a broader scope of work to be done. The program specifically assists minority institutions in establishing and supporting environmental research activities that will build capacity to assess and solve environmental problems. A broad range of research issues will be supported at these institutions.

- (+$440,000, + 4 FTE) This represents an increase in workyears to the EDCs program. These resources will focus on computational toxicology, specifically techniques of molecular profiling as the foundation for determining genes responsible for specific mechanisms EDCs' toxicity.

- (-$9,700,000, -1 FTE) Funding for EPA's STAR Fellowship Program was eliminated in FY 2003 as part of a larger effort to increase environmental science education programs at the National Science Foundation. We will finish the commitment to fellowships awarded in previous years. However, fellowships that support minority academic institutions will continue.

- (-$3,753,800) The FY 2003 Request is $3,753,800 below the 2002 Enacted budget due to the Congressional earmarks received during the appropriations process which are not included in the 2003 President's Request.

- (-$1,440,700, -2 FTE) This reduction reflects funding provided in the FY 2002 Emergency Supplemental Appropriation used to perform research to enhance understanding of biological agents and the ability to mitigate and prevent harm caused by these agents.

Annual Performance Goals and Measures

Research

Mercury Research

In 2003 Support development of regulations on mercury emissions from coal-fired utility boilers by producing data on measurement methods and control technology performance, cost, and residues so that EPA can effectively reduce human health and environmental risk from mercury.

In 2002 Provide methods for quantifying mercury emissions from manmade sources to improve domestic and international estimates of mercury levels, and assess the cost and performance of control/prevention options for key sources, such as utility boilers

In 2001 EPA developed a new peer-reviewed and consensus IRIS entry for methylmercury, including a reference dose (RfD) The results of bench and pilot testing aimed at managing mercury risks from coal-fired utility boilers was delayed until FY 2002.

Performance Measures.	FY 2001	FY 2002	FY 2003

	Actual	Enacted	Request	
Publish results of bench and pilot testing aimed at identifying improved sorbents for mercury mitigation from coal-fired utility boilers	0			publication
Make recommendations, as appropriate, for revision of EPA's RfD for methylmercury based on analysis of the National Academy of Sciences report on mercury	30-Sep-2001			recommendations
Report on the parameters that impact both the species of mercury in coal-fired utility boiler flue gas and the performance of promising mercury control technologies		1		report
Report on the performance/cost of reducing mercury emissions taking into account coal properties,combustion conditions, flue gas cleaning technologies and other air pollution control systems			1	report

Baseline EPAs Mercury Study Report to Congress identified emissions from coal-fired utilities as one of the most significant contributors of mercury to the air. On December 14, 2000, EPA determined that mercury emissions from coal-fired utilities needed to be regulated Regulations are to be promulgated in three years and finalized a year after that The most cost-effective technological approaches for controlling mercury emissions from utilities are not well understood Control technologies must be evaluated prior to regulation with a goal of minimizing mercury emissions at the lowest possible cost

Coordination with Other Agencies

Research

The broad nature of the EDCs issue necessitates a coordinated effort on both the national and international levels. EPA has shown extensive leadership at both levels - chairing the Committee on Environment and Natural Resources (CENR) interagency working group and chairing a Steering Group on Endocrine Disruptors under the auspices of the World Health Organization's International Program on Chemical Safety (IPC/WHO) and the Organization for Economic Cooperation and Development (OECD). Due to the complex nature of the uncertainties posed by endocrine disrupting chemicals, the overlapping concerns of Federal agencies, and the resource constraints on the Federal budget, close coordination and cooperation among Federal agencies are essential to the resolution of critical research questions. While the CENR provides the umbrella for this coordination, individual agencies are responsible for the development of their own independent research plans. Under EPA's leadership, an inventory of Federal research on endocrine disruption has been developed and is used to evaluate Federal efforts, identify research gaps and establish priorities, and clarify governmental roles and responsibilities (www.epa.gov/endocrine).

Working with other nations, EPA has expanded the U.S. Federal inventory to include projects from Canada, Japan, and Europe and has turned it into a Global Endocrine Disruptors Research Inventory with close to 800 projects. The joint IPC/WHO - OECD Steering Group on Endocrine Disruptors is developing a "Global State-of-the-Science Review," scheduled for completion in calendar year 2002. Both the inventory and the international assessment result from recommendations made at the 1997 G-8 Environmental Ministers' Meeting. In FY 2003, EPA will continue to collaborate with European countries under the U.S.-EU Science and Technology Agreement and with Japanese scientists under the U.S.-Japan Science and Technology Agreement.

EPA is in a unique position to focus Federal pollution prevention efforts in the critical area of mercury research. Progress has been made in organizing the concepts and ideals of pollution prevention in the private sector, but much work remains. The Agency, through partnerships with private sector companies, non-profits, other Federal agencies, universities, and states, including California EPA, has worked to identify and control human exposure to methylmercury. EPA has also been working with the Department of Energy and the U.S. Geological Survey to address risk management issues associated with mercury emissions from utilities as well as issues on the ecological effects of mercury and environmental processes effecting the fate and behavior of mercury.

EPA will continue to support jointly sponsored economic workshops with other regulatory agencies, such as the Food and Drug Administration and Department of Agriculture, to address the economic valuation of human health effects. These workshops on economics and environmental policy will continue to draw upon EPA-sponsored economic research, facilitating information exchanges among academic and Federal regulatory agency representatives. EPA is also coordinating its research strategy with other federal agencies interested in environmental economics and social science research including the Department of Justice (DOJ) and the National Science Foundation (NSF).

Statutory Authorities

Research

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

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Improve Environmental Systems Management.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Improve Environmental Systems Management.	**$59,130.3**	**$57,757.0**	**$52,274.1**	**($5,482.9)**
Environmental Program & Management	$6,310.6	$5,648.9	$2,706.1	($2,942.8)
Hazardous Substance Superfund	$0.0	$0.0	$2,468.0	$2,468.0
Science & Technology	$52,819.7	$52,108.1	$47,100.0	($5,008.1)
Total Workyears	164.5	148.2	146.6	-1.6

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$92.3	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$8,705.0	$13,512.1	$0.0	($13,512.1)
Environmental Technology Verification (ETV)	$6,294.0	$3,607.7	$3,617.6	$9.9
Facilities Infrastructure and Operations	$3,204.5	$2,290.0	$2,084.0	($206.0)
Homeland Security	$0.0	$40.4	$1,875.0	$1,834.6
Legal Services	$237.1	$251.9	$270.7	$18.8
Management Services and Stewardship	$872.7	$382.0	$351.4	($30.6)
Research to Support Pollution Prevention	$39,156.5	$37,672.9	$44,075.4	$6,402.5

FY 2003 Request

In FY 2003, the Agency will continue to move from one-dimensional solutions involving a single medium/single pollutant to an integrated, systems-based approach stressing pollution prevention. This approach more closely fits with the Agency's complex challenge of responding to the multiple, interactive stressors that threaten both human and environmental health, enables a more thorough assessment of human health and environmental risks, and supports a more complete set of management responses to those risks. EPA will accomplish its holistic approach to pollution prevention through research on pollution prevention tools and technologies, green chemistry, environmental systems management, and environmental technology verification, and through the National Environmental Technology Competition.

This objective focuses on the development of tools and methodologies to assist decision-makers in choosing the most preferred pollution prevention options. Research in FY 2003 will: (1) provide methods and models for management and prevention of source-specific emissions that threaten public health and ecological systems; (2) provide methods and tools to compare risks associated with different treatment technologies and management options; (3) develop more flexible and useful life cycle assessment methods; (4) incorporate life cycle and cost engineering concepts into industrial process simulators; (5) improve the ability to measure and objectively evaluate the environmental and human health impacts of risk management options; and (6) advance impact assessment theories, methodologies, and tools, including the capability to address such non-chemical impacts as resource depletion, habitat alteration, and decreased biodiversity. This research will also accelerate the adoption and incorporation of pollution prevention by developing, testing, and demonstrating technologies and approaches applicable across economic sectors. In a broader context, pollution prevention tools and technologies research will continue expanding beyond its traditional focus on industrial sectors to other sectors (e.g., energy, agriculture) and ecosystems.

EPA's Small Business Innovation Research (SBIR) Program, which is funded through a 2.5% set-aside of the Agency's extramural research and development budget, makes awards to small, high-tech firms to help develop and move new environmental tools and technologies from "proof of concept" to commercialization. The SBIR program targets research to prevent pollution, reduce water and air pollution, manage solid and hazardous wastes, and improve environmental monitoring - in each case addressing priorities in the Agency's Strategic Plan. Recognizing that the expense of carrying out research and development programs is often beyond the means of small businesses, SBIR participants receive both financial and technical assistance in developing and commercializing technologies according to the anticipated market. The technologies developed under SBIR help the regulated community meet environmental requirements in a more cost-effective manner (e.g., small water systems meet the new drinking water standard for arsenic); enable industry to reduce the use of toxic and hazardous materials in production processes and in recovering and recycling materials for reuse; and provide new approaches to designing more environmentally friendly products.

Green chemistry and clean technologies, fundamental approaches to preventing pollution at the source, involve the design of chemicals and alternative chemical syntheses that do not use toxic

feedstock, reagents, or solvents, and do not produce toxic by-products or co-products. Green chemistry research will provide generic guidance to industry, particularly small and medium-sized companies, for selecting cleaner reaction pathways for conducting syntheses of a wide variety of organic products. Green chemistry research will also contribute to the development of safer commercial substances and environmentally friendly chemical syntheses. Research on clean technologies will be focused on designing, developing and verifying alternative materials, products, and processes that minimize use, emission, and discharge of toxic chemicals in mining, metal finishing, building/construction, and chemical sectors. This type of research is also conducted in partnership with the National Science Foundation (NSF) through EPA's Technology for a Sustainable Environment (TSE) program, which supports the development of cutting-edge pollution prevention technology through chemistry, chemical engineering, bioengineering, industrial ecology, and environmentally benign manufacturing tools. Research performed under the banner of industrial ecology will generate engineering or economic approaches to prevent or reduce waste from discrete and continuous industrial manufacturing activities. Efforts will explore equipment and technology modifications, reformulation of products, substitution of alternative materials, and in-process changes in order to reduce harmful emissions of volatile organic compounds (VOCs), global warming compounds, and persistent bioaccumulative toxics (PBTs).

A critical enabler of green chemistry and clean technologies is the development of technical tools that facilitate the development of technologies. The development of life cycle assessment (LCA) tools, specifically the simplified tools that can be afforded by small businesses, is a critical need to be addressed in product and process design. Other tools in this category are computer-based methods for assessing environmental impacts of products and processes, for designing cleaner processes, designing non-toxic solvents and solvent mixtures, and constructing a web-based LCA data portal. Research in green chemistry and clean technologies will be conducted in partnership with program and regional offices and industry.

The Agency will additionally support prevention, minimization, and, when possible, elimination of PBTs by improving methods for their identification and testing. Research will focus on the following areas: (1) dioxins/furans and polychlorinated biphenyls (PCBs); (2) persistent organic pollutants; (3) mercury B from source characterization to retirement of mercury stocks; and (4) the development of a national routine PBT monitoring strategy. By concentrating on these areas, EPA will advance the understanding of exposure, assessment, and management of PBTs while simultaneously working toward PBT prevention.

Another facet of this objective, environmental systems management research, endeavors to integrate environmental management with economic development and social equity, while simultaneously expanding environmental stewardship by industries, governments, and citizens. FY 2003 research in this area will explore the principles governing sustainable systems; the integration of social, economic, and environmental objectives in environmental assessment and management for communities, watersheds, and eco-regions; and the development of principles for the sustainable use of biotechnological systems. All these research efforts have been fashioned to include partners in EPA regions and several environmental institutes so that valuable inputs from potential users can be incorporated in the initial phases of this research.

Another component of research under this objective, the Environmental Technology Verification (ETV) program, addresses the difficulty of garnering financial support for and public acceptance of environmental technologies. ETV is a voluntary, market-grounded verification program for commercial-ready technologies, with over 1,000 stakeholders who represent all points of view within environmental areas. The goal of ETV is to verify the performance characteristics of private-sector-developed technologies so that purchasers, users, and permit writers have the information they need to make environmentally-beneficial decisions. The program is designed so that, as the value of ETV verification becomes more broadly appreciated, technology developers will be required to cover an increasing share of the verification costs

By the end of FY 2003, the ETV program will have delivered more than 150 test plans and protocols, making them available to the entire research and testing community, and will have verified over 200 technologies, making data on their performance available for public use. Technology verifications during FY 2003 will focus on advanced monitoring; air pollution control; greenhouse gas abatement; drinking water systems; and water protection. EPA will continue to enhance program outreach efforts through the ETV website, national conferences and workshops, and state permit writer training

EPA will also facilitate the adoption of innovative environmental technologies by the public and private sectors through the final component of this objective, the National Environmental Technology Competition (NETC). This new effort for FY 2003 addresses both the need for innovative technologies to solve environmental problems and the reluctance of potential buyers to assume the economic risks of using an unproven technology. Through NETC, EPA and its stakeholders will identify and prioritize environmental problems that can benefit from targeted, cost-effective technological solutions. EPA will develop competitive solicitations for technologies in a specified problem area (e.g., arsenic removal) and an external peer review panel will select the most promising technologies. In an effort to enhance the marketability and use of these innovative technologies, EPA will offer the winning technologies honorary awards, recognition, and other support to assist in commercialization.

In FY 2003, an area for technology solicitations will be arsenic removal from drinking water. This work will be an important source of EPA's commitment for research and development of more cost-effective treatment technologies to help small community water systems meet the new arsenic drinking water standard. Other potential areas for technology solicitations include: models to support effluent trading plans for total maximum daily loads (TMDLs); water and wastewater infrastructure repair and replacement; reduction of greenhouse gas emissions; and continuous monitoring of mercury in flue gases. Both EPA and states will encourage the use of NETC technologies by disseminating information and by using the technologies as performance benchmarks in regulations or enforcement agreements, or as a basis for cap-and-trade approaches. NETC will lead to better understanding between EPA and the industrial sector of areas of environmental concern, to the alignment of future environmental requirements with technology performance capabilities, to an increase in the quantity and quality of cost-effective options for the mitigation and prevention of environmental problems, and ultimately to a cleaner, safer environment

through a new level of environmental stewardship by industry and government.

Annual Performance Goals and Measures

Research

Pollution Prevention Tools and Methodologies

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

In 2001 EPA integrated a waste reduction algorithm with costing software and a chemical process simulation package and completed a decision support tool for life cycle analysis of municipal solid waste to enhance a preventive approach to risk management and the use of pollution prevention options

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Integrate the process change/waste reduction algorithm (WAR) with costing software (Icarus) and a chemical process simulation package (Aspen)	1			package
Complete a decision support tool for life cycle analysis of municipal solid waste management options	1			tool & report
Publish a peer-reviewed protocol for conducting Risk Management Evaluations	0			protocol
Complete grant on development of tool for predicting biodegradability of compounds	0			grant report
Enhance the Waste Reduction Algorithm environmental impact assessment tool used to design or retrofit chemical processes with (1) a better assessment methodology and (2) new features (costing)		1		method
Prepare a pest resistance management framework to prolong the effectiveness of genetically-modified corn pesticide characteristics for the Office of Pesticide Programs during product registration		1		protocol
Provide a PC-based tool for use by EPA and the metal finishing sector in evaluating exposure and inhalation health risks to workers and residents living near metal finishing facilities		1		risk tool

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

New Technologies

In 2003 Develop 10 testing protocols and complete 40 technology verifications for a cumulative Environmental Technology Verification (ETV) program total of 230 to aid industry states, and consumers in choosing effective technologies to protect the public and environment from high risk pollutants

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

In 2001 EPA developed, evaluated, and delivered technologies and aproaches that eliminate minimize, or control high risk pollutants from multiple sectors Delivery of the evaluative report on the Environmental Technology Verification (ETV) pilot program is delayed until FY 2002

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Deliver a Report to Congress on the status and effectiveness of the Environmental Technology Verification (ETV) Program during its first five years	0			report
Complete performance evaluations of various metal finishing processes aimed at zero-discharge metal pretreatment as replacements for more hazardous processes	1			report
Complete a capstone report summarizing current knowledge about volatile organic compounds and hazardous air pollutants emissions from paints used indoors	1			report
Develop new process for dryecleaning microelectronic wafers to decrease water usage and toxic chemicals	0			grant report
Complete 20 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV and provide them to testing organizations world-wide		20		protocols
Verify and provide information to States technology purchasers and the public on 40 air, water, pollution prevention and monitoring technologies for an ETV programmatic total of 230 verifications			40	verifications
Complete an additional 10 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV and provide them to testing organizations world-wide			10	protocols

Baseline Actual environmental risk reduction is directly related to performance and effectiveness of environmental technologies purchased and used Private sector technology developers produce almost all of the new technologies purchased in the U S and around the world Purchasers and permitters of environmental technologies need an independent, objective high quality source of performance information in order to make more informed decisions, and vendors with innovative, improved, faster, and cheaper environmental technologies need a reliable source of independent evaluation to be able to penetrate the environmental technology market In FY 02 the first year of operating, after the pilot period ended in FY 01, the Environmental Technology Verification (ETV) Program will have delivered in FY 02 more than 20 additional protocols making them available to the entire research and testing community, and will have verified approximately 30 additional technologies for a programmatic total of 180 making data on their performance available for public use as well

Verification and Validation of Performance Measures

FY 2003 Congressional Performance Measure (PM): Verify and provide information to states, technology purchasers, and the public on 40 air, water, pollution prevention, and monitoring technologies for an ETV programmatic total of 230 verifications.

Performance Database: Program output, no internal tracking system

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Reviews: Technology verifications

Data Limitations: N/A

New/Improved Data or Systems: N/A

FY 2003 Congressional Performance Measure (PM): Complete an additional 10 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV, and provide them to testing organizations world-wide.

Performance Database: Program outputs, no internal tracking system

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Reviews: Test protocols
Data Limitations: N/A

New/Improved Data or Systems: N/A

FY 2003 Change from FY 2002

S&T

- (+$9,750,000) This increase represents a new effort for FY 2003, the National Environmental Technology Competition (NETC), which will foster the adoption of cost-effective technologies for environmental priority areas by the public and private sectors through a competitive award process. NETC will lead to better understanding between EPA and the industrial sector of areas of environmental concern, to the alignment of future environmental requirements with technology performance capabilities, and to an increase in the quantity and quality of cost-effective options for the mitigation and prevention of environmental problems. Through coordination with states, Program and Regional Offices, and other stakeholders, EPA will prioritize areas of environmental concern that can benefit from the application of innovative technologies. One of the areas planned for competitive solicitations will be treatment technologies for arsenic in small community drinking water systems. Another potential area for competitive solicitations is models to support effluent trading plans for total maximum daily loads (TMDLs).

- (-$9,610,700) The FY 2003 Request does not include $9,610,700 contained in the FY 2002 Enacted budget level due to Congressional earmarks from the appropriations process not carried forward in the FY 2003 President's Request.

- (-$3,000,000) This FY 2003 reduction eliminated funding for FY 2002 Congressionally-directed work under the National Technology Transfer Center (NTTC).

- (-$2,030,100) This reduction relates to the change in resources set aside for the Small Business Innovative Research (SBIR) Program from its FY2002 levels, and is primarily due to the fact that FY2002 Congressional earmarks are not included in the FY2003 Presidents Request.

EPM

- (-$2,535,100) The FY 2003 Request is $2,535,100 below the FY 2002 Enacted budget level due to Congressional earmarks received during the FY 2002 appropriations process that are not included in the FY 2003 Presidents Request.

- (-$189,900) This reduction relates to the change in resources set aside for the Small Business Innovative Research (SBIR) Program from its FY 2002 levels, and is primarily due to the fact that FY 2002 Congressional earmarks are not included in the FY 2003 Presidents Request.

Superfund

- (+$1,875,000) This increase relates to resources set aside for the Small Business Innovative Research (SBIR) Program and allocated in FY 2003 for Homeland Security building decontamination technology development by small businesses.

Coordination with Other Agencies

Research

Pollution prevention, cost benefit analyses, and environmental technology verification are all research areas that lend themselves to and benefit from engagement with other Federal organizations.

In partnership with the National Science Foundation (NSF), EPA's Technology for a Sustainable Environment (TSE) program supports the development of cutting-edge pollution prevention technology through chemistry, chemical engineering, industrial ecology, and manufacturing. The EPA/NSF partnership in TSE is entering its seventh year of supporting research to prevent pollution at its source.

Under the Persistent Bioaccumulative Toxics (PBT) program, EPA has been working with the U.S. Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), and the Centers for Disease Control and Prevention (CDC) to develop a national routine PBT monitoring strategy. Through the integration of existing monitoring programs, this new strategy will ultimately meet the mutual monitoring objectives of EPA and other Federal agencies.

EPA has contributed projects to the Department of Defense's (DOD's) Strategic Environmental Research and Development Program (SERDP), with particular emphasis on the

pollution prevention pillar and the use of life cycle thinking in addressing the production and manufacture of weapons and military hardware. Preliminary contacts have been made with the Department of Agriculture (USDA) regarding life cycle analysis and a preventive approach for the development and advancement of biologically and genetically altered products. Additionally, EPA and DOD's U.S. Army Corps of Engineers will continue addressing the costs and benefits associated with the implementation of new engineering projects and technologies in order to understand and respond to the economic impacts of environmental innovation.

With respect to the Environmental Technology Verification (ETV) program, EPA has co-funded efforts to verify the performance of site characterization and monitoring devices with the Department of Energy's (DOE) Sandia and Oak Ridge National Laboratories. EPA signed a Memorandum of Agreement with DOD to verify jointly environmental technologies that are of mutual interest to EPA and DOD's Environmental Security Technology Certification Program (ESTCP). In June 2001, the U.S. Coast Guard (USCG) and EPA signed a Memorandum of Agreement to verify jointly the performance of innovative environmental technologies to control ballast water discharges that may contain invasive species and that have had significant and adverse economical and ecological impacts.

Statutory Authorities

Research

Clean Air Act
Safe Drinking Water Act
Clean Water Act
Toxic Substances Control Act
Federal Insecticide, Fungicide, and Rodenticide Act
Resource Conservation and Recovery Act
Superfund Amendments Reauthorization Act
Clean Air Act Amendments of 1990
Pollution Prevention Act of 1990
Small Business Innovation Development Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Quantify Environmental Results of Partnership Approaches.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena
Quantify Environmental Results of Partnership Approaches.	**$9,539.9**	**$8,672.7**	**$9,058.4**	**$385.7**
Environmental Program & Management	$9.539.9	$8.672.7	$9.058 4	$385 7
Total Workyears	16.1	16 7	18 0	1.3

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Congressionally Mandated Projects	$698.5	$700 0	$0.0	($700.0)
Facilities Infrastructure and Operations	$0.0	$215 6	$241 9	$26.3
Legal Services	$42.9	$47 3	$53 3	$6.0
Management Services and Stewardship	$164.1	$100.6	$112 1	$11.5
Regional Geographic Program	$8.192.3	$7.609 2	$8 651 1	$1.041.9
Regional Management	$506 4	$0.0	$0 0	$0 0

FY 2003 Request

The Regional Geographic Initiatives (RGI) program is a holistic approach to long-term, cross-programmatic environmental enhancement that has proved successful in repeated applications.

Since 1994, the RGI program has funded hundreds of projects, including projects in all 50 states, in Tribal lands, and in U.S. territories and possessions. The RGI program is a critical resource for place-based, state-of-the-art multi-media projects and has succeeded in fostering a wide array of partnerships, including those with states, businesses and local communities. The RGI program is different from other, more traditional EPA programs in that it addresses environmental risk holistically (multi-media) and actively fosters partnering. RGI is, therefore, EPA's role model for transitioning from a single-media to a multi-media focus, based on consensus building, science, and risk

One of the hallmarks of the RGI program has always been the ability to use RGI funds to "leverage" funds from a wide variety of outside sources. Practically all of the grants made under this program include the commitment of substantial funds from EPA's partners, often greatly in excess of the funding level provided by EPA. The RGI Program enables EPA Regional offices to work with states, local governments and the private sector, in specific places on problems identified as high priority by the Regions, based on both national and regional criteria, and to bring additional resources to bear from EPA partners in a highly focused effort.

The funding for this effort was established in 1993 to enable the Regions to apply state-of-the-art, multi-media approaches to projects designed to bridge the gap between media-based, program-driven funding priorities, and the cross-jurisdictional, multi-media priorities identified by Regional comparative risk exercises. It funds projects that are important to the regions and the states, but which are not funded elsewhere in EPA's budget, such as an ozone flex project in six southern states that allows areas in near non-attainment to develop voluntary air quality plans tailored to local needs.

FY 2003 Change from FY 2002 Enacted

EPM

•(+$1,000,000) The FY 2003 Request is $1,000,000 above the FY 2002 Enacted level to enable the Regions to address their priority funding needs for multi-media, community-based environmental protection activities. This will fund 12-20 new projects, allowing states, local governments, and private partners to identify community-specific solutions to their unique environmental issues.

Verification and Validation of PMs

None

Coordination with Other Agencies

None

Statutory Authorities

Multi-media

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Incorporate Innovative Approaches.

Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Incorporate Innovative Approaches.	**$24,887.3**	**$23,324.5**	**$29,787.9**	**$6,463.4**
Environmental Program & Management	$24,488.2	$23,324.5	$29,787.9	$6,463.4
Science & Technology	$399.1	$0.0	$0.0	$0.0
Total Workyears	127.1	120.2	126.7	6.5

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Administrative Services	$64.6	$0.0	$0.0	$0.0
Common Sense Initiative	$1,781.1	$1,838.7	$0.0	($1,838.7)
Congressionally Mandated Projects	$4,729.4	$1,000.0	$0.0	($1,000.0)
Facilities Infrastructure and Operations	$0.0	$1,784.4	$1,821.7	$37.3
Legal Services	$328.8	$380.3	$409.3	$29.0
Management Services and Stewardship	$34.0	$186.1	$168.7	($17.4)
Performance Track	$1,995.6	$1,834.6	$1,834.6	$0.0
Project XL	$2,948.9	$0.0	$0.0	$0.0
Regulatory Development	$10,430.3	$13,251.3	$22,429.6	$9,178.3
Small Business Ombudsman	$3,000.9	$3,049.1	$3,124.0	$74.9

FY 2003 Request

A critical priority for EPA in FY 2003 will be to improve the Agency's regulatory and policy development process. The Agency will strengthen the policy analysis of key regulatory and non-regulatory actions, improve the economic analysis underlying Agency actions, and improve the

regulatory and policy action information management system. The multimedia analysis will include policy option analysis, regulatory analysis, and analysis of innovative policy approaches. Work will also be directed at strengthening accountability to stakeholders by improving the quality and availability of regulatory data to stakeholders.

In order to reform the regulatory system to achieve better results at less cost, without sacrificing public health or environmental protection, EPA will pursue a program focused on sectors, facility-based pilots, small business, performance incentives, and communities. In the course of this work, the Agency will continue to work closely with states, tribes, and local governments, and will pay particular attention to the needs of small and medium-sized businesses. EPA's revised strategy for innovation, the product of deliberation among all the Regional and media offices, will be reflected in a report to be issued in mid 2002.

EPA's community-based approach works to provide integrated assessment tools and information for environmental protection in partnership with local, state, and Tribal governments. EPA Regions also provide direct assistance to communities to assist them in implementing local environmental management efforts and in building capacity for local problem solving. In FY 2003, EPA will continue to support over 150 demonstration projects assisting local community environmental planning and management. These projects strengthen local and intergovernmental partnerships to address risks to human health and ecosystems that provide goods and services to our communities. Specifically, EPA will provide assistance to communities to help them identify the integrated set of local environmental issues and develop strategies to address interconnected issues with appropriate regulatory and non-regulatory tools EPA will also provide tools and information to build better stakeholder involvement and to assist communities in conducting assessments of environmental issues. EPA will assist local communities with identifying measures of performance to enlighten local decisions and assess the value of various models of community-based efforts. EPA will also conduct evaluations of existing projects to assess and fine-tune its own approaches and to derive direction for future demonstrations.

The Agency will more effectively integrate and manage EPA's resources and efforts that are currently available for promoting environmental quality at the community level. The Agency will work to ensure that those communities pursuing development strategies that incorporate environmental quality considerations receive appropriate credit under the Agency's core program areas - air quality, water quality, waste management. Under this goal, the Agency will focus on improving environmental quality by: (1) removing barriers and creating incentives for environmentally beneficial development; (2) developing tools and technical assistance (e.g., the Smart Growth Index); (3) leveraging EPA's resources to provide and disseminate information (e.g., through web sites and publications); (4) forming multi-disciplinary, multi-lateral partnerships among public and private sector stakeholders; and (5) identifying and conducting research related to environmental quality impacts associated with development patterns and practices.

In response to a large and growing number of requests from states and local governments to help them address environmental issues associated with growth and development, the Agency has increased its activities under smart growth. EPA will help states and local governments achieve

their environmental goals using smart growth approaches. EPA will integrate smart growth approaches to environmental quality and voluntary smart growth programs within key program offices and Regional offices. EPA will also develop regulatory incentives that will encourage redevelopment within metropolitan areas and help preserve watersheds, open space, and habitats. These incentives will also encourage more environmentally-friendly development in rural areas.

EPA is also exploring the potential for more integrated, holistic regulatory approaches at a facility level, building on experience with permitting and pollution prevention innovations already piloted at both Federal and state levels. EPA sees facility-wide approaches as holding the possibility of obtaining better environmental results while eliminating unnecessary regulatory burdens. These approaches should also help stimulate pollution prevention, and help facilities obtain the maximum benefit from their use of environmental management systems.

Sector strategies complement current EPA activities by allowing the Agency to approach issues more holistically, with integrated strategies for each industry sector. Sector-based approaches also enable EPA to 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. In FY 2003, EPA will continue to implement recommendations in its Sector Program Plan 2001-2005 (endorsed by the National Advisory Council on Environmental Policy and Technology in November 2000). The Agency's sector programs will expand their innovative sector-based approaches to improved environmental protection, continuing work with current sectors (e.g., the Metal Finishing Strategic Goals Program), starting new work with interested industries, and developing recommended tools and services through a new Center for Industry Sector Innovation to enhance the performance of sector programs at the Federal, state, and local levels.

In FY 2003, the Agency will extend its sector-based programs by building consideration of sector-specific applications into the development of regulations and policy/guidance documents. It will build on previous sector successes, concentrating on sectors with high concentrations of small businesses and complementing goals in EPA's new Innovations Strategy. EPA will continue to work with sectors to remove barriers to improved environmental performance with reduced regulatory burden. Sector-based approaches are also inherent in other innovations that the Agency is exploring or scaling up, such as the Massachusetts Environmental Results Program and the PrintStep Program.

In FY 2003, the Agency will build on its recent successes and continue to work with the small business community to develop new tools, and explore incentive approaches that are tailored, information rich, and are key to a company's bottom line and improved performance. The Agency will support the integration of small business assistance and policy innovation efforts with the program offices, and explore more creative ways to deal with compliance assistance and enforcement. We will work with program offices to streamline and coordinate Agency efforts to provide more reliable environmental information to existing state assistance providers and to small businesses.

In the process of developing sectoral approaches, EPA will continue to add to the set of tools it uses to effectively and efficiently deliver environmental quality, promote pollution prevention, and increase risk reduction. While EPA continues to rely on standard setting, permitting and enforcement, these traditional tools are now often augmented by compliance assurance, voluntary programs, stakeholder involvement and many new sector-based processes and programs designed to ensure quicker or more effective results. In support of these strategies, EPA will continue to implement projects that offer flexibility or other benefits to test innovative approaches to environmental protection.

The Office of Policy, Economics, and Innovation (OPEI) will serve as a primary gateway for stakeholders/customers to interact with EPA on innovation and will define the vision, strategy, ground rules, and principles for innovation by engaging stakeholders. The Office will ensure new approaches are identified, designed, and piloted by program-specific approaches in other EPA offices and manage Agency-wide approaches. OPEI will integrate and coordinate new approaches across the Agency into a coherent strategy for change, tracking innovation progress and evaluating innovation success, and ensuring successful new approaches are incorporated into the way EPA does business.

EPA has developed a broad-based, Agency-wide strategy for achieving cleaner, cheaper, smarter results from environmental programs. By rethinking problems and the solutions typically used to solve them, the Agency's innovation strategy engages Agency managers and staff, as well as external stakeholders, in finding better ways of doing business without imposing unnecessary costs and regulatory burdens. Through innovation and streamlining the current regulatory system (e.g., consolidate and simplify regulations and reporting requirements, and streamline permitting), and through designing and testing integrative and holistic approaches (e.g., sector- and industry-based approaches, and community-based environmental protection partnership programs). EPA is implementing strategies that lead to better protection at less cost, and is moving beyond the single-media focus of the past to better address today's multi-media environmental challenges.

In FY 2003, EPA will implement the Agency's Innovations Strategy. The Strategy, developed through a joint effort by EPA and the states to implement lessons learned from innovation experiences to date, strategically focuses the Agency's innovation activities on priority environmental problems. Work in FY 2003 will include further integrating innovation efforts with those of the states; developing new tools and approaches; adapting the culture and management systems to foster innovation; and focusing on measuring and evaluating results. The Agency will continue to build its capacity to conduct program evaluation and foster its use as a management tool for continuous program improvement. This activity responds to recommendations from the National Academy of Public Administration and will ensure that EPA is able to keep pace with the rapidly expanding program evaluation activities at the state level and the emergence of Environmental Program Evaluation as a nationally-recognized sub-discipline.

In FY 2003, EPA will work to provide incentives and rewards to good environmental performers in the business community. The Agency will continue the Performance Track Program so that those businesses that perform well are treated differently from those that do not. EPA will

continue to pursue reforms in the permitting system and to develop policy on the role of environmental management systems in environmental regulation. Using lessons learned from recent initiatives, EPA will undertake projects suggested by internal or external stakeholders that test ways to modify EPA's core programs to foster flexibility (in regulations, policy, and guidance) as incentives and to gain superior environmental performance. Taken together with related work across the Agency, this approach is designed to promote a systematic process of experimentation, evaluation, and program change in response to the lessons learned from innovation.

FY 2003 Change from FY 2002 Enacted

EPM
(-$1,844,700/-13.3 FTE) The Common Sense Initiative will be eliminated and the lessons learned from this program have influenced new generations of environmental innovation policy.

•(+$9,599,200/23.3 FTE) The FY2003 Request is $9,599.200 and 23.3 FTEs above the FY 2002 Request level to fund regulatory development activities. These resources will support the management of an expanded regulatory development process, strengthen economic analyses, expand Performance Track, and increase regulatory innovation efforts in sectors, evaluation, and industrial ecology activities. Increased payroll costs are also reflected in this request.

Coordination with Other Agencies

None

Statutory Authorities

National Environmental Policy Act

The Economy Act of 1932

Toxic Substances Control Act sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)

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

Clean Water Act

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Demonstrate Regional Capability to Assist Environmental Decision Making.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena
Demonstrate Regional Capability to Assist Environmental Decision Making.	**$6,417.2**	**$6,677.9**	**$6,591.8**	**($86.1)**
Environmental Program & Management	$3,656.9	$3,622.6	$3,647.1	$24.5
Hazardous Substance Superfund	$2,760.3	$3,055.3	$2,944.7	($110.6)
Total Work years	3.9	3.0	3.0	0.0

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena.
Facilities Infrastructure and Operations	$0.0	$156.1	$43.6	($112.5)
Management Services and Stewardship	$0.0	$2.2	$1.7	($0.5)
Regional Science and Technology	$3,850.3	$3,574.9	$3,601.8	$26.9
Superfund Remedial Actions	$2,993.4	$2,944.7	$2,944.7	$0.0

FY 2003 Request

The Regional Science and Technology (RS&T) program will continue to provide field sampling, analytical, and data management support, including quality assurance to base program needs operating within the Regions before and after implementation of statutory mandates.

Within the existing Regional laboratory system, specialized expertise has been developed to respond to specific Regional needs. These capabilities, collectively called the Centers of Applied Science, have broad application and frequently constitute the best knowledge of the subject in the

country. Through these Centers of Applied Science, the Regional laboratories are committed to advancing state-of-the-art applied science and sharing that information to state, local, and other Federal agencies through training and other appropriate forums. Centers have been established in the areas of ambient air monitoring, analytical pollution prevention, environmental biology, environmental microbiology, and environmental chemistry.

Data and information management systems will be in place, including data quality indicators, that will enable EPA and partner agencies to locate, assess and share environmental data for their program needs. The RS&T program will continue to build capacity and support partner agencies by providing technical and analytical support in the assessment of environmental problems, and by converting environmental data into useful decision-making information.

FY 2003 Change from FY 2002 Request

- none

Verification and Validation of PMs

None

Coordination with Other Agencies

None

Statutory Authorities

Multi-media

Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems

Objective: Conduct Peer Review to Improve Agency Decisions.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v FY 2002 Ena.
Conduct Peer Review to Improve Agency Decisions.	**$2,727.0**	**$3,242.9**	**$3,690.3**	**$447.4**
Environmental Program & Management	$2,727.0	$3,242.9	$3,690.3	$447.4
Total Workyears	22.8	22.5	22.5	0.0

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v FY 2002 Ena
Facilities Infrastructure and Operations	$0.0	$340.2	$326.5	($13.7)
Management Services and Stewardship	$0.0	$14.9	$11.3	($3.6)
Science Advisory Board	$2,775.1	$2,887.8	$3,352.5	$464.7

FY 2003 Request

The Science Advisory Board (SAB) plans to maintain the level and quality of its peer review activities to support the Agency by selecting issues for review that best meet the criteria for SAB review: i.e, those that impact on overall environmental protection, address novel problems or principles, influence long-term technological development, deal with problems that transcend Agency boundaries, strengthen the Agency's basic capabilities, and/or serve Congressional and other leadership interests.

In addition, the SAB will expand its efforts to incorporate the technical aspects of economics and other social sciences into environmental decision making and to find the best ways to integrate science considerations into the Agency's new ways of doing business (e.g., place-based and sector-

based).

For many years the SAB's goal has been to make a positive difference in the production and use of science at EPA. Established by Congress in 1978, the SAB utilizes non-government technical experts who serve as its 100 members and more than 300 consultants. They come from a broad range of disciplines -- physics, chemistry, biology, mathematics, engineering, ecology, economics, medicine, and other fields. Operating under the Federal Advisory Committee Act (FACA), the SAB empanels technically strong and diverse groups to ensure a balanced range of technical views from academia, communities, states, independent research institutions, and industry.

To truly make a positive difference in the production and use of science at EPA, the Board must do more than review Agency products from traditional-line offices. It must help the Agency make strategic use of science. Science alone is insufficient for making environmental decisions, but it is impossible to protect human health and the environment without science.

Economic and other social science issues are particularly important now that EPA is experimenting with new information-based, voluntary approaches to environmental protection -- such as working with stakeholders in communities and sectors to achieve environmental goals that voluntarily go beyond the national standards. Therefore, the SAB will find effective ways for science to contribute to the Agency's new ways of doing business.

In FY 2001, the SAB made changes to address concerns raised by the Government Accounting Office concerning procedures to ensure that there are no conflicts of interest among members of the SAB and that review panels are balanced. A process has been drafted and it is anticipated that the new procedures will be fully operational during FY 2002.

FY 2003 Change from FY 2002 Enacted

EPM

- none

Verification and Validation of PMs

None

Coordination with Other Agencies

The Science Advisory Board (SAB) interacts with comparable advisory bodies within and outside the Agency; in some cases, seeking and maintaining liaison and integrated membership with some of these bodies. For example, the chairs of the ORD Board of Scientific Counselors (BOSC), the FIFRA Scientific Advisory Panel (SAP), and the Children's Health Protection Advisory Committee participate in the quarterly meetings of the SAB Executive Committee (EC) meetings.

There are also membership contacts and exchanges with technical advisory bodies in the Department of Defense, Department of Energy, and the National Research Council of the National Academy of Sciences. In addition, the Board has sought interactions with advisory groups at different levels (e.g., the advisory committee to the Mayor of Columbus, Ohio; the environmental advisory board to the Governor of the State of Michigan; the Health Council of the Netherlands; and the Academy of Sciences of Australia). The success of the SAB is measured, in part, by the extent to which the Board is used as a model for advisory boards at various levels of government -- from the local level to the international level.

Statutory Authorities

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

Goal 9: A Credible Deterrent to Pollution and Greater Compliance with the Law IX-1
Increase Compliance Through Enforcement IX-7
Promote Compliance Through Incentives and Assistance IX-31

A Credible Deterrent to Pollution and Greater Compliance with the Law

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
A Credible Deterrent to Pollution and Greater Compliance with the Law	**$393,979.3**	**$393,550.1**	**$402,462.9**	**$8,912.8**
Increase Compliance Through Enforcement.	$337,582.6	$337,781.6	$346,590.5	$8,808.9
Promote Compliance Through Incentives and Assistance.	$56,396.7	$55,768.5	$55,872.4	$103.9
Total Workyears	2,511.2	2,492.5	2,330.7	-161.8

Background and Context

Protecting the public and the environment from risks posed by violations of environmental requirements is basic to EPA's mission. Many of America's environmental improvements over the last quarter century are attributable to a strong set of environmental laws and an expectation of compliance with those laws. EPA's enforcement program has been the centerpiece of efforts to ensure compliance, and has achieved significant improvements in human health and the environment.

Means and Strategies

Many of the environmental improvements in this country during the past 30 years can be attributed to a strong set of environmental laws and EPA's ensuring compliance with the laws using a variety of tools including: enforcement, compliance monitoring, compliance assistance, and compliance incentives in cooperation with our regulatory partners.

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, assists the regulated community in

understanding environmental laws and regulations, punishes violators, strives to secure a level economic playing field for law-abiding companies, and deters future violations. EPA's continued enforcement efforts will be strengthened through the development of measures to assess the impact of enforcement activities and assist in targeting areas that pose risks to human health or the environment, display patterns of noncompliance and include disproportionately exposed populations. Further, EPA cooperates with other nations to enforce and ensure compliance with environmental regulations.

The Agency reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions and settlement agreements and to determine whether conditions presenting imminent and substantial endangerment exist The majority of workyears devoted to compliance monitoring are provided to the regions to conduct investigations and on-site inspections including monitoring, sampling and emissions testing. Compliance monitoring activities are both environmental media- and sector-based. The traditional media-based inspections complement those performed by states and tribes and are a key strategy for meeting the long-term and annual goals established for the air, water, pesticides, toxic substances, and hazardous waste environmental goals included in the EPA Strategic Plan.

The Agency's enforcement and compliance assurance program uses compliance assistance and incentive tools to ensure compliance with regulatory requirements and reduce adverse public health and environmental problems. To achieve compliance, the regulated community must understand its regulatory obligations and how to comply with those obligations. EPA supports the regulated community by assuring that requirements are clearly understood and by helping industry find cost-effective options to comply through the use of pollution prevention and innovative technologies. EPA also enables other assistance providers (e.g., states, universities) to provide compliance information to the regulated community. Maximum compliance requires the active efforts of the regulated community to police itself. EPA will continue to investigate options for encouraging self-directed audits and disclosure; measure and evaluate the effectiveness of Agency programs in improving compliance rates; provide information and compliance assistance to the regulated community; and develop innovative approaches to meeting environmental standards through better communication, cooperative approaches and application of new technologies.

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

Strategic Objectives and FY 2003 Annual Performance Goals

Increase Compliance Through Enforcement

- Maintain and improve quality and accuracy of EPA's enforcement and compliance data to identify noncompliance and focus on human health and environmental problems.

- Improve capacity of states, localities, and tribes to conduct enforcement and compliance programs. Maintain a well-trained EPA workforce that can provide training, technical support, and provide backup inspection support and expertise for complex inspections done jointly with States and Tribes. EPA will provide training as well as assistance with state and tribal inspections to build capacity, including implementation of the inspector credentials program for State/Tribal inspection programs.

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

- EPA will conduct 14,000 inspections, 400 criminal investigations, and 200 civil investigations targeted to areas that pose risks to human health or the environment, display patterns of non-compliance or include disproportionately exposed populations. In addition, EPA will respond to public complaints in a timely manner.

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

Promote Compliance Through Incentives and Assistance

- Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

- Promote the use of Environmental Management Systems (EMS) to address known compliance and performance problems.

- Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as online compliance assistance centers and compliance guides.

Highlights

Environmental Enforcement

Coordinating its activities with the states, EPA will continue to support deterrence and compliance activities by focusing its compliance monitoring on site inspections and investigations. In setting the compliance and enforcement priorities and strategic direction of the program, EPA coordinates its efforts with and solicits the views of our states partners. The Agency uses the State/EPA Enforcement Forum as a vehicle in advancing the coordination of efforts for joint strategic planning between EPA and the states.

The Agency will continue to work with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. Media-specific and industry sector-based priorities have been established for the national program through the Office of Enforcement and Compliance Assurance's Memorandum of Agreement 2002/2003 guidance, developed in conjunction with the Regional offices.

The civil and criminal enforcement program, in contributing to EPA's goal to protect public health and the environment, targets its actions based on health and environmental risk. The program aims to level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance and seeks to deter future violations. In FY 2003, the Agency's enforcement initiatives include enforcement of lead paint rules, and modernization of its data systems to assist in targeting compliance and enforcement efforts.

State, Tribal, and International Capacity Building

A strong state and tribal enforcement and compliance assurance presence contributes to creating deterrence and to reducing noncompliance. In FY 2003, the enforcement and compliance assurance programs will work with and support state agencies implementing authorized, delegated, or approved environmental programs. Consistent with regulations and EPA policy, the Agency will provide an appropriate level of oversight and guidance to states to ensure that environmental regulations are fairly and consistently enforced across the nation.

The Agency provides grant funding, oversight, training and technical assistance to states and tribes. The state and tribal grant programs are designed to build environmental partnerships with states and tribes and strengthen their ability to address environmental and public health threats. These threats include contaminated drinking water, pesticides in food, hazardous waste, toxic substances and air pollution.

Meeting its objective of achieving the benefits of environmental requirements through an enforcement presence requires EPA to effectively implement international commitments for enforcement and compliance cooperation with other countries, especially those along the U.S. border. Through such arrangements, EPA works to reduce environmental risks to U.S. citizens from external sources of pollution, as well as to prevent or reduce the impact of pollution originating in the United States.

Compliance Incentives and Assistance

The Agency will continue to support the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs. In FY 2003, the compliance incentives program will continue to implement the policy on Incentives for Self-Policing. Small Business Compliance Policy and Small Communities Policy as core elements of the enforcement and compliance assurance program. In addition. the Agency will provide information and technical assistance to the regulated community through the compliance assistance program to increase its understanding of statutory and regulatory environmental requirements, thereby reducing risk to human health and the environment and gaining measurable improvements in compliance. The program will continue to develop strategies and compliance assistance tools that will support initiatives targeted toward improving compliance in specific industrial and commercial sectors or with certain regulatory requirements. The annual Compliance Assistance Activity Plan provides information on planned compliance assistance activities in the upcoming fiscal year and will serve as a reference for other assistance providers and the public on EPA's planned tools and activities. The Agency will continue to support the sector based Compliance Assistance Centers, update the Compliance Clearinghouse, sponsor a Federal advisory committee on compliance assistance, and will continue to develop and enhance a APlatform@ from which to launch additional assistance centers.

External Factors

The Agency enforcement and compliance program's ability to meet its annual performance goals may be affected by a number of factors. Projected performance could be impacted by natural catastrophes, such as major floods or significant chemical spills, that require a redirection of resources to address immediate environmental threats. Many of the targets are coordinated with and predicated on the assumption that state and tribal partners will continue or increase their levels of enforcement and compliance work. If these assumptions do not come to fruition, EPA's resources may be needed to cover priority areas. In addition, several EPA targets rely on the Department of Justice to accept and execute cases. The success of EPA's activities hinge on the availability and applicability of technology and information systems. Finally, the regulated community's willingness to comply with the law will greatly influence EPA's ability to meet its performance goals.

Other factors, such as the number of projects subject to scoping requirements initiated by other federal agencies, the number of draft/final documents (Environmental Assessments and Environmental Impact Statements) submitted to EPA for review, streamlining requirements of the Transportation Equity Act for the 21st Century (TEA-21), and the responsiveness of other federal agencies to environmental concerns raised by EPA, may also impact the Agency's ability to meet its performance goals.

Lastly, the NEPA Compliance workload is driven by the number of project proposals submitted to EPA for funding or NPDES permits that require NEPA compliance, including the Congressional projects for wastewater, water supply, and solid waste collection facility grants,

which have increased in recent years.

A Credible Deterrent to Pollution and Greater Compliance with the Law

Objective: Increase Compliance Through Enforcement.

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

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena
Increase Compliance Through Enforcement.	**$337,582.6**	**$337,781.6**	**$346,590.5**	**$8,808.9**
Environmental Program & Management	$243,937.0	$239,905 0	$233,721.7	($6,183 3)
Hazardous Substance Superfund	$15,037 3	$19,016.6	$18,687 9	($328 7)
Science & Technology	$10,684.0	$10,948.6	$11,269 5	$320.9
State and Tribal Assistance Grants	$67 924.3	$67,911.4	$82,911 4	$15,000 0
Total Work years	2,092.2	2,075 9	1,932.6	-143.3

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$4 432 7	$0.0	$0 0	$0 0
Capacity Building	$10,395.3	$9,417.1	$10,342.7	$925 6
Civil Enforcement	$102,817 0	$101,437 2	$99,718.8	($1,718.4)
Compliance Assistance and Centers	$351.6	$406 7	$378.0	($28 7)
Compliance Incentives	$415 9	$284 6	$292 6	$8.0
Compliance Monitoring	$56,781 2	$53,216 3	$51,198 4	($2,017.9)
Criminal Enforcement	$40,840 1	$41,555 7	$42,538 1	$982.4
Data Management	$15 479 7	$16,069.9	$16,372.7	$302.8
Enforcement Training	$5,277.7	$3,947.3	$3 880 4	($66.9)
Environmental Justice	$159.4	$0 0	$0.0	$0.0
Facilities Infrastructure and Operations	$34,719 8	$25,957.5	$27,464 3	$1,506 8
Homeland Security	$0 0	$10,467 8	$3,807.0	($6,660.8)
Legal Services	$855.7	$988.5	$1,057.4	$68.9
Management Services and Stewardship	$2,877.8	$5 804.7	$6,391 3	$586 6
NEPA Implementation	$233.9	$226.9	$237 4	$10 5

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena
RCRA Enforcement State Grants	$43,127.6	$42,904.7	$42,904.7	$0.0
Regional Management	$1,031.2	$90.0	$0.0	($90.0)
State Multimedia Enforcement Grants	$0.0	$0.0	$15,000.0	$15,000.0
State Pesticides Enforcement Grants	$19,867.8	$19,867.8	$19,867.8	$0.0
State Toxics Enforcement Grants	$5,138.9	$5,138.9	$5,138.9	$0.0

FY 2003 Request

The Agency's enforcement and compliance assurance program has been the centerpiece of efforts to provide a deterrent to pollution by ensuring compliance with environmental laws and regulations, and has achieved significant improvements in public health and the environment. By identifying and addressing violations of environmental statutes and regulations, the enforcement and compliance assurance program will work together with states and tribes toward continuous improvement in compliance with standards, permits, and other established requirements to mitigate and avoid environmental problems and their associated risks.

Given the scope of its responsibilities and the large, diverse universe of private, public, and federal facilities regulated under the various statutes, the Agency also will work to maximize its effectiveness by strategically targeting its compliance and enforcement activities to address the most significant risks to human health and the environment and to address disproportionate burden on certain populations. A strong compliance and enforcement program achieves environmental protection by identifying noncompliance problems, holding violators accountable and deterring future violations, while ensuring a level economic playing field for environmentally friendly companies.

State, tribal and local governments bear much of the responsibility for ensuring compliance. EPA will increase its efforts, through its new enforcement grant, to work with the states, tribes, and other Federal agencies to promote environmental protection. Further, EPA will cooperate with other nations to enforce and ensure compliance with international agreements affecting the environment. These activities also ensure a level economic playing field in an increasingly global trading system.

Environmental Enforcement

The Agency performs the compliance monitoring, civil enforcement, and criminal enforcement program activities in this objective. In FY 2003, the Agency's enforcement and compliance assurance program will measure its performance not only in terms of inspections and enforcement actions, but also in terms of pollutant reductions, and other human health and environmental outcomes the program produces. This Annual Plan contains annual performance goals and measures to show results such as reducing significant non-compliance and behavioral changes resulting from compliance assistance and enforcement efforts. These measures complement the traditional enforcement measures and portray a more complete picture of the environmental results of the enforcement and compliance assurance program.

Compliance Monitoring. The Agency reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions, settlement agreements, and to determine whether conditions presenting imminent and substantial endangerment exist. The majority of workyears devoted to compliance monitoring are provided to the regions to conduct investigations and on-site inspections including monitoring, sampling and emissions testing. Compliance monitoring activities are both environmental media- and sector-based. The traditional media-based inspections complement those performed by States and Tribes and are a key strategy for meeting the long-term and annual goals established for air, water, pesticides, toxic substances, and hazardous waste in the EPA Strategic Plan. The multi-media approaches, such as cross-media inspections, sector initiatives, and risk-based targeting allow the Agency to take a more holistic approach to protecting ecosystems and to solving the more intractable environmental problems. Under the Federal Facility Compliance Act (FFCA), EPA conducts hazardous waste inspections of all Federal treatment, storage and disposal (TSD) facilities. The program will also conduct single media and multimedia inspections to ensure compliance by Federal facilities.

To maintain EPA's expertise in field monitoring and to ensure compliance with EPA Order 3500.1, the Agency will support development of Inspectors' manuals, training modules, and delivery of training to Regional, State, and Tribal inspectors and program managers. The EPA Order 3500.1 establishes consistent Agency-wide training and development programs for employees leading environmental compliance inspections/field investigations to ensure that they have working knowledge of regulatory requirements, inspection methodology, and health and safety measures. The Order consists of a 3-level training program for compliance inspectors/field investigators: Occupational Health and Safety Curriculum, Basic Inspector Curriculum, and Program-Specific Curriculum. EPA compliance inspectors/field investigators must complete the required training before conducting a compliance inspection/field investigation. The materials will cover sampling tools, use of new technology including the use of EPA's information systems and training on conducting inspections as EPA moves to e-sign (a process where the inspection forms/reports are filled out electronically and certified as legal documents). Maintaining an effective inspection program depends on a well-trained workforce.

In FY 2003, EPA will review and respond to 100 percent of the notices for transboundary movement of hazardous waste, ensuring that these wastes are properly handled in accordance with

international agreements and Resource Conservation and Recovery Act (RCRA) regulations. Through analysis of notices, manifests, tracking documents, and Annual Reports, EPA monitors compliance with relevant regulations and takes enforcement actions as necessary. While the vast majority of the hazardous waste trade occurs with Canada, the U.S. also has agreements concerning international trade in hazardous wastes with Mexico, Malaysia, Costa Rica, and member countries of the Organization for Economic Cooperation and Development (OECD) In calendar year 2001, EPA responded to 1,431 notices regarding 7,682 distinct waste streams.

In FY 2003, the compliance monitoring program will continue to work with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. Media-specific and industry sector-based priorities have been established for the national program through the Office of Enforcement and Compliance Assurance's Memorandum of Agreement 2002/2003 guidance, developed in conjunction with the Regional offices, States and Tribes. These national priorities include: Ensuring Cleaner Water; (Clean Water Act-(Wet Weather) and Safe Drinking Water Act (Microbial Rules); Protecting Air Quality (Clean Air Act- (New Source Review/Prevention of Significant Deterioration, Petroleum Refinery Sectors and Air Toxics); and Better Management of Hazardous Wastes (RCRA-(Permit Evaders). The Office has also added two management priorities, Expand and Improve Compliance Assistance and Incentives Programs, and Improve Data Quality and Management.

In FY 2003, EPA estimates that it will conduct 14,000 inspections targeted to areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately-exposed populations. As part of this inspection target, the Agency plans to perform 2,000 inspections under the lead provisions of the Toxic Substances Control Act (TSCA).

Civil Enforcement. The Agency's civil enforcement program will address violations of environmental laws and ensure that violators come into compliance with these laws and regulations.

The civil enforcement program achieves the Agency's environmental goals through consistent, fair, and focused enforcement of all environmental statutes. The overarching goal of the civil enforcement program is to protect public health and the environment, and therefore, targets its actions based on health and environmental risk. Further, it aims to level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance, and seeks to deter future violations.

To accomplish these goals, the civil enforcement program is responsible for the development, litigation, and settlement of administrative and civil judicial cases against serious violators of priority environmental laws. The federal program will focus its resources on national environmental and human health problems, transboundary pollutants, and multi-state industrial violators. The Federal facilities enforcement program will continue to ensure that Federal facilities and Government-Owned-Contractor-Operated facilities conduct their activities in an environmentally sound manner and comply with all applicable laws, regulations, permits and executive orders.

In FY 2003, program management will provide direction to, set goals and priorities for, and evaluate and review the national enforcement program. Enforcement staff will develop guidance and policy for technical evaluations, investigations, and case development strategies which may include the use of injunctive relief, Supplemental Environmental Projects and other civil penalties as appropriate. Further, enforcement staff will participate in the development of, or revision to, regulations and interpretive guidance.

As part of the National Energy Plan, OECA will implement innovative procedures recently developed to allow facilities that are unable to start or expand energy production due to air quality permitting constraints to make these changes quickly while simultaneously obtaining the required permits and controlling their pollution. The Agency is working with utility and refinery companies that agree to settle claims of Clean Air Act violations to ensure that the agreements contain provisions that allow predicted capacity expansions to affected facilities. These provisions include emission credits or caps that allow them to make changes without triggering permit requirements.

Criminal Enforcement. The criminal enforcement program brings to bear the Agency's most powerful enforcement tool against the most significant environmental violations. By demonstrating that the regulated community will be held accountable for serious, willful statutory violations in terms of jail sentences and criminal fines, the program acts to forcefully deter violations of environmental laws and regulations in a way that civil judicial and administrative enforcement rarely do. EPA's special agents, located nationwide, will conduct criminal investigations, develop information to support grand jury inquiries and decisions, and work with other law enforcement agencies to present a highly visible and effective force in the Agency's enforcement strategy. Cases are referred to the U.S. Attorney's Offices of the Department of Justice for prosecution, with special agents serving as key witnesses in these judicial proceedings. The criminal enforcement program places particular emphasis on cooperation with state and local law enforcement through participation in task forces and enhancing capacity through specialized training and community policing efforts.

EPA's efforts to work more closely and cooperatively with industry are complemented by the criminal enforcement program as the Agency sends a clear message to the regulated community that those who choose to cooperate, in good faith, will reap the benefits of that partnership while those whose noncompliance is distinguished by culpable conduct can expect the serious implication of criminal investigation and prosecution. In FY 2003, EPA estimates that it will conduct 400 criminal investigations targeted to areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. EPA will also continue to develop and deploy a secure network to ensure proper handling of confidential law enforcement information used in the criminal program.

The Agency's forensic program provides specialized support for the nation's most complex civil and criminal enforcement cases and technical expertise for non-routine Agency compliance efforts. To effectively support these activities, the program must maintain state-of-the-art skills and equipment, capable of dealing with an increasingly sophisticated regulated community. EPA's National Enforcement Investigations Center (NEIC) is the only accredited environmental forensics

center in the world. Their Accreditation Standard has been customized to cover the civil, criminal, and special program work conducted by the program.

In FY 2003, the forensic program will complete an upgrade to meet International Standards of Operation for environmental data measurements to maintain accreditation. The program will also continue to develop emerging technologies in analytical techniques. Efforts to stay at the forefront of environmental enforcement will include the refinement of successful multi-media inspection approaches, use of customized lab methods to solve unusual enforcement case problems, and further development of a computer forensic expertise for use in seizure and recovery of data, and in investigative support related to computers and data fraud. In addition, the program will provide technical support for the initiatives identified as FY 2003 priorities in the civil program and will support the Agency's integrated compliance monitoring program using a unique process based approach.

Data Systems Modernization

Reliable, comprehensive and up-to-date data systems are key to EPA's ability to effectively target compliance monitoring for environmental problems in the highest priority sectors and to measure the effectiveness of its enforcement activities. The Agency will continue to maintain and support the fourteen information systems that house national enforcement and compliance data with less than 5% down-time. EPA will expand the development of Quality Management Plans (QMPs) building on those developed for the National Compliance Data Base/FIFRA and TSCA Tracking System, the Resource Conservation and Recovery Information System, and a final data quality audit for the Permit Compliance System (PCS). The Agency is developing a Data Quality Strategy focusing on: expansion of the public access and error correction functions of the Integrated Data for Enforcement Analysis system (IDEA) and the Online Targeting Information System (OTIS), objective verification of core data fields across systems and programs through random sampling technology, and resolution of data quality problems as they relate to interpretation of data definitions. In FY 2003, the Agency will have a QMP or equivalent in place for the initial release of the Integrated Compliance Information System (ICIS) and will begin modifications to the Plan to incorporate subsequent phases of ICIS (the National Permit Discharge Elimination System, Air, Toxics, and Pesticides).

In FY 2003, the Agency will continue its efforts in the phased implementation of ICIS. ICIS will be a consolidated enforcement and compliance information management system that will provide a single definitive source of information for the national enforcement and compliance assurance program. ICIS will consolidate and streamline enforcement and compliance information that is currently contained in fourteen existing systems. This new system will reduce burden and duplication by providing a single source for data entry, will improve public access to data, support the development of risk reduction strategies, and will provide states and Regions with a modernized system to meet their program management and accountability responsibilities. The Agency's modernization of the Permit Compliance System (PCS), which serves the permitting and enforcement program needs of the National Pollutant Discharge Elimination System, will be conducted concurrently with the phased implementation of ICIS in FY 2003.

In addition, in FY 2003, EPA will provide a range of modernization efforts. For the NPDES program, PCS will be in the completion of system software development stage, training and implementation stage, providing desktop, web based access to State and EPA managers and staff as well as providing greater public access to timely and accurate environmental data. The modernization of the AIRS Facilities System (AFS), will commence the design stage. Replacement of these systems is key to the Agency's ability to use the significant amount of information collected from the States and localities to direct and manage the permitting and enforcement programs.

State, Tribal, and International Capacity Building

A strong state and tribal enforcement and compliance assurance presence is essential to EPA's long-term strategic plan objective to identify and reduce significant noncompliance in high priority areas while maintaining a strong enforcement presence in all regulatory program areas. Most of the Nation's environmental laws envision a strong role for state governments in implementing and managing environmental programs. In FY 2003, the enforcement and compliance assurance program will continue support to state agencies implementing authorized, delegated, or approved environmental programs through the new enforcement grant program. Consistent with regulations and Agency policy, EPA will provide an appropriate level of oversight and guidance to states to ensure that environmental regulations are fairly and consistently enforced across the Nation.

EPA works with Indian tribes on a government-to-government basis to identify enforcement, compliance assistance, and capacity building issues affecting tribal lands. The Agency's goal is to help tribes develop their own enforcement and compliance assistance programs so that they can assume greater management of environmental programs in Indian Country. In FY 2003, the enforcement and compliance assurance program will continue to implement the Indian Program Strategy which will direct federal enforcement, tribal enforcement, and compliance capacity-building efforts. By monitoring and evaluating progress made, EPA will ensure that the plan's commitments are met in a timely fashion. These efforts will help implement the Agency-wide Indian Policy of working with tribal governments as full partners to enhance protection of the public health and the environment on tribal lands.

The state and tribal grant programs are designed to build environmental partnerships with states and tribes and to strengthen their ability to address environmental and public health threats. These threats include contaminated drinking water, pesticides in food, hazardous waste, toxic substances, and air pollution. In FY 2003, the enforcement and compliance assurance program will continue to award state and tribal enforcement grants to assist in the implementation of the enforcement grant program and continued implementation of the compliance and enforcement provisions of the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). These grants support state and tribal compliance activities to protect the environment from harmful chemicals and pesticides. The enforcement component of RCRA state grants is also included in this objective.

- The Agency will provide $15 million to assist states and tribes in enforcing the environmental laws delegated to their states. These funds will allow states to assume greater responsibility for improving compliance with environmental laws and regulations through the use of enforcement and other tools.

- Under the Pesticides Enforcement Grant program, EPA provides resources to states and Indian tribes to conduct FIFRA compliance inspections and take appropriate enforcement actions, and implement programs for farm worker protection.

- States receive toxic substances grant funding for compliance inspections of asbestos and PCBs and for implementation of the state lead enforcement program. The funds will complement other Federal program grants for building state capacity for lead abatement, and enhancing compliance with disclosure, certification and training requirements. States will be encouraged to direct their compliance monitoring efforts toward entities most affected by the PCB AMega Rule.@ This rule increased the number and type of units which are required to register with EPA and the additional funding will assist the states to focus on inspection and compliance assistance activities to entities who fail to timely register PCB equipment, correctly mark PCB equipment, and to provide information to the regulating authority under the PCB Mega Rule. In the asbestos program, the increase will allow the Agency to assist States to focus on: 1) additional state asbestos AHERA inspections and compliance assistance with emphasis on Charter Schools; and 2) developing and conducting asbestos training courses that incorporate both the AHERA and NESHAP programs. In addition, the increase will be used to fund newly authorized states under the TSCA lead program.

- EPA will also provide the States grant funding to inspect federal, state, and local RCRA facilities that store, treat, or dispose of hazardous waste. Inspections will emphasize compliance with facility-specific requirements or interim status requirements. RCRA enforcement orders and supplemental environmental projects will incorporate waste minimization provisions, where appropriate.

The Agency also provides single media enforcement grants to the states which are funded under other environmental goals supporting air and water programs.

Meeting its objective of achieving the benefits of environmental requirements through an enforcement presence requires EPA to effectively implement international commitments for enforcement and compliance cooperation with other countries, especially those along the U.S. border. Through such arrangements, EPA works to reduce environmental risks to U.S. citizens from external sources of pollution, as well as to prevent or reduce the impact of pollution origination in the United States.

Enforcement Training

The Agency's enforcement training program is mandated by the Pollution Prosecution Act to provide environmental enforcement training nationally through the National Enforcement Training Institute (NETI). is mandated by the Pollution Prosecution Act to provide environmental enforcement training nationally. The program oversees the design of core and specialized enforcement courses and their delivery to lawyers, inspectors, civil and criminal investigators and technical experts. In FY 2003, the program continue development of a training center on the Internet. ANETI Online@ will offer timely, targeted technical training courses to as wide an audience as possible, providing a structure for developing and tracking individual training plans and management of the program's training delivery processes.

The Agency also provides specialized classroom training in criminal environmental law enforcement at the Department of Treasury's Federal Law Enforcement Training Center (FLETC) in Glynco, GA. FLETC was developed to train law enforcement personnel who carry firearms. The program develops and delivers basic and advanced training to EPA Special Agents and their state, local and tribal partners across the United States and in selected counties worldwide. FLETC provides one of the few opportunities for state, local, and tribal enforcement professionals to obtain criminal investigations training. In FY 2003, the enforcement training program will further enhance opportunities for hands-on training with the development of a practical exercise facilities in Denver, Colorado.

Homeland Security Enforcement

With the events of September 11, 2001, and the establishment of the Office of Homeland Security, the EPA has taken on expanded responsibilities for counter terrorism and anti-terrorism activities. As the subject matter expert for environmental crimes involving weapons on mass destruction, biological, and chemical attacks, EPA criminal enforcement program plays a critical role in performing crisis management (i.e., law enforcement) roles and responsibilities under Presidential Decision Directive 39. In FY 2003, Special Agents will provide environmental crimes expertise to the Federal Bureau of Investigation's (FBI) Joint Terrorism Task Forces and the Department of Justice's (DOJ) Anti-Terrorism Tasks Forces. Staff will also form five National Counter Terrorism Response Teams to coordinate with FBI field offices, perform protective duty services for the Administrator's Office and provide on-site investigative support for designated National Security Special Events. Additionally, experts at the National Enforcement Investigations Center (NEIC) will respond with technical support in the event of a terrorist caused release of hazardous chemicals. As part of the Federal Counter Terrorism response, NEIC's staff provide on-scene technical and scientific advise, forensic evidence collection and chemical identification of released substances.

FY 2003 Change from FY 2002 Enacted

EPM

- (-$5,618,500) The Supplemental appropriation Congress provided in FY 2002 for Homeland Security efforts were not requested in FY 2003

- (-$8,180,000, -81.8 FTE) Reduction to support the new multimedia enforcement grant program to the states.

- (-$1,623,400) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security, and human resource operations are allocated in proportion to Headquarters FTE located in each goal and objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars, and FTE associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal and objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities. +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants, and contracts related activities.)*

STAG

- (+$15,000,000) Increase will provide new enforcement grants to the states.

Superfund

- (-$1,392,000, -10 FTE). The Supplemental appropriation Congress provided in FY 2002 for Homeland Security efforts were not requested in FY 2003

- (+$637,200) Resources, dollars, and FTE associated with rent are allocated in proportion to Agency-wide FTE located in each goal and objective. Resources, dollars, and FTE associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal and objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars, and FTE associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

FY 2003 Change from FY 2002 Enacted

EPM

- (-$1,780,000, -17.8 FTE) Reduction to support the new multimedia enforcement grant program to the states.

Annual Performance Goals and Measures

Non-Compliance Reduction

In 2003 EPA will direct enforcement actions to maximize compliance and address environmental and human health problems

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

In 2001 EPA directed enforcement actions to maximize compliance and address environmental and human health problems

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Millions of pounds of pollutants required to be reduced through enforcement actions settled this fiscal year (core optional)	660	300	300	M pounds
75% of concluded enforcement actions require physical action that result in pollutant reductions and/or changes in facility management or information practices OECA will break out the %	74	75	75	Percent
Develop and use valid compliance rates or other indicators of compliance for selected populations	6	5	5	Populations
Reduce by 2 percentage points overall the level of significant noncompliance recidivism among CAA CWA and RCRA programs from FY 2000 levels	2 4	2		PercentagePc
Increase by 2 percent over FY 2000 levels the proportion of significant noncompliter facilities under CAA, CWA, and RCRA which returned to compliance in less than two years (core required)	1 33	2		PercentagePc
Produce report on the number of civil and criminal enforcement actions initiated and concluded		1		Report
Maintain or reduce the level of significant noncompliter recidivism under the CAA			<=25	percent
Maintain or reduce the level of significant noncompliter recidivism under the CWA			<=55	percent
Maintain or reduce the level of significant noncompliter recidivism under RCRA			<=17	percent
Maintain or decrease the proportion of significant noncompliter facilities under CAA which returned to compliance in more thatn two years			<=15	percent
Maintain or decrease the proportion of significant noncompliter facilities under CWA which returned to compliance in more than two years			<=19	percent
Maintain or decrease the proportion of significant noncompliter facilities under RCRA which returned to			<=15	percent

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
compliance in more than two years				

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

Inspections/Investigations

In 2003 EPA will conduct inspections criminal investigations, and civil investigations targeted to areas that pose risks to human health or the environment display patterns of non-compliance or include disproportionately exposed populations

In 2003 EPA will provide direct investigative, forensic, and technical support to the Office of Homeland Defense, FBI and /or other federal, state and local law enforcement agencies to help detect and prevent, or respond to terrorist-related environmental biological or chemical incidents

In 2002 EPA will conduct inspections, criminal investigations, and civil investigations targeted to areas that pose risks to human health or the environment, display patterns of non-compliance or include disproportionately exposed populations

In 2001 EPA conducted inspections and civil and criminal investigations targeted to areas with patterns of non-compliance that pose risks to human health or the environment or include disproportionately exposed populations

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of EPA inspections conducted (core required)	17 812	15500	14000	inspections
Number of Criminal Investigations	482	400	400	Investigation
Develop a list of high priority facilities in Indian country for the enforcement and compliance program	1			list
Number of Civil Investigations	368	200	180	Investigation
Establish minimum core compliance monitoring program for selected high priority facilities in Indian country		5	4	Percent
EPA will respond to investigative leads that relate to security of homeland environment, FBI requests for support, and participate in all National Special Security Events as requested			100	percent

Baseline The compliance monitoring program works with states and tribes to target areas that pose risks to human health or the environment display patterns of noncompliance or include disproportionately exposed populations The number of inspections projected varies each year by the complexity of facilities targeted In FY03, EPA will maintain its enforcement presence by conducting at least 14,000 inspections 400 criminal investigations and 180 civil investigations

Quality Assurance

In 2003 Identify noncompliance, and focus enforcement and compliance assurance on human health and environmental problems, by maintaining and improving quality and accuracy of data

In 2002 Maintain and improve quality and accuracy of EPA's enforcement and compliance data to identify noncompliance and focus on human health and environmental problems.

In 2001 EPa maintained and continued to improve enforcement and compliance data used to identify noncompliance and focus on human health and environmental problems

Performance Measures	FY 2001	FY 2002	FY 2003

	Actual	Enacted	Request	
Complete Phase I of Integrated Compliance Information System (ICIS) development (programming) and begin Phase II	1			Phase
Operate 14 information systems housing national enforcement and compliance assurance data with a minimum of 95% operational efficiency	95	95		Percent
Design and develop Phase II of ICIS (modernization of the Permit Compliance System (PCS)) by September 2003			1	Data System
Have Phase I of the Integrated Compliance Information system ICIS fully operational in March 2002		1		Phase
Ensure that enf and compl data is reported in 14 nat info systems to provide Fed and state programs accurate and timely data through which env and human health problems can be identified			95	efficiency

Baseline EPA's ability to target and measure effectiveness of its enforcement activities depends upon reliable and up-to-date data systems EPA's 14 data systems will continue to operate at 95% or better operational efficiency In conjunction with the operation and maintenance of existing systems, EPA will continue its system modernizing efforts and improve data integration and consistency

Capacity Building

In 2003 Improve capacity of states, localities and tribes to conduct enforcement and compliance programs EPA will provide training as well as assistance with state and tribal inspections to build capacity, including implementation of the inspector credentials program for tribal law enforcement personnel

In 2002 Improve capacity of states localities and tribes to conduct enforcement and compliance programs EPA will provide training as well as assistance with state and tribal inspections to build capacity, including implementation of the inspector credentials program for tribal law enforcement personnel

In 2001 OECA improved the capacity of states localities and tribes to conduct enforcement and compliance programs

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of EPA training classes/seminars delivered to states, localities and tribes to build capacity		200		Classes
Conduct EPA-assisted inspections to help build state program capacity	895	400	250	Inspections
The National Enforcement Training Institute will train Tribal personnel.	428			personnel
Provide tribal governments with 50 computer-based training (CBT) modules	235	50	50	Training mo
Total number of state and local students trained		4900		Students
Train Tribal personnel		95		Personnel

Baseline Improve capacity of states, localities and tribes to conduct enforcement and compliance programs by providing training as well as assistance with state and tribal inspections

International Enforcement

In 2003 Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports

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

In 2001 EPA did ensure compliance with legal requirements for proper handling of hazardous waste imports and exports

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Track, consent to, and /or acknowledge the movement of haz wastes into and out of the U S to ensure proper management to protect the env and public health and safety			100	percent

Baseline In FY03 EPA will review and respond to 100 percent of the notices for transboundary movement of hazardous waste, ensuring that these wastes are properly handled in accordance with international agreements and the Resource Conservation and Recovery Act regulations

Verification and Validation of Performance Measures

Performance Measure (PM): 75% of concluded enforcement actions require physical action that result in pollutant reductions and/or changes in facility management or information practices. OECA will breakout the percentage among, physical, facility management and information practices.

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

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

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

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

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

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

Performance Measure (PM): Millions of pounds of pollutants required to be reduced through settled enforcement actions. (Core optional)

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

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

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

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

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

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

Performance Measure (PM): Develop and use valid compliance rates or other indicators of compliance for selected populations.

Performance Databases: The Permit Compliance System (PCS) tracks National Pollutant Discharge Elimination System (NPDES) permit and enforcement actions, as well as reporting and scheduling requirements. The Airs Facility Subsystem (AFS) captures emission, compliance and permit data for major stationary sources of air pollution. The Resource Conservation and Recovery Act Information System (RCRAInfo) supports permit, compliance, and corrective action activities carried out by the hazardous waste handlers.

Data Source: EPA regional offices, and delegated states

QA/QC Procedures: All of the systems have been developed in accordance with the Office of Information Management's Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third-party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: Regarding AFS, EPA Inspector General (IG) reports in 1997 and 1998 highlighted states' problems with identifying and reporting significant violators of the Clean Air Act, impairing EPA's ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, local areas.

Data Limitations:. For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and

differences in data definitions impede integrated analyses. Additionally, there are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. Further complicating the issue, significant violator definitions changed for the RCRA program in 1996 and for the Air program in Fiscal Year 1999. These differences within and across programs make long-term data comparison impractical.

New & Improved Data or Systems: PCS modernization is underway. EPA is preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. A pilot project to develop statistically valid compliance rates for selected universes of regulated facilities is underway. Also, a National Performance Measure Strategy project on the impact of EPA strategies on recidivism focuses attention on better compliance assurance targeting, i.e., monitoring, compliance assistance, incentives and enforcement.

Performance Measure (PM): Number of EPA inspections conducted.

Performance Databases: Integrated Data for Enforcement Analysis (IDEA) integrates data from major enforcement and compliance systems, such as the Permit Compliance System (PCS), Air Facilities Subsystem (AFS), Resource Conservation and Recovery Act Information System (RCRAInfo), and Emergency Response Notification system (ERNS).

Data Source: EPA regional offices.

QA/QC Procedures: All the systems have been developed in accordance with the Office of Information Management's Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third-party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: Regarding AFS, EPA Inspector General (IG) reports in 1997 and 1998 highlighted states' problems with identifying and reporting significant violators of the Clean Air Act, impairing EPA's ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, local areas.

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. Additionally, there are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is underway. EPA is preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. A pilot project to develop statistically valid compliance rates is underway.

Performance Measure (PM): Number of criminal investigations

Performance Databases: The Criminal Docket System (CRIMDOC) is a criminal case management, tracking, and reporting system. Information about criminal cases investigated by the U.S. EPA-Criminal Investigation Division (CID) is entered into CRIMDOC at case initiation, and investigation and prosecution information is tracked until case conclusion.

Data Source: U.S. EPA-CID offices.

QA/QC Procedures: The system administrator performs regularly scheduled quality assurance/quality control checks of the CRIMDOC database to validate data and to evaluate and recommend enhancements to the system.

Data Quality Review: N/A

Data Limitations: N/A

New & Improved Data or Systems: A new case management, tracking, and reporting system (Case Reporting System) is currently being developed that will replace CRIMDOC. This new system will be a more user-friendly database with greater tracking, management, and reporting capabilities.

Congressional Performance Measure (PM): Number of civil investigations

Performance Databases: Integrated Data for Enforcement Analysis (IDEA) integrates data from major enforcement and compliance systems, such as the Permit Compliance System (PCS), Air Facilities Subsystem (AFS), Resource Conservation and Recovery Act Information System (RCRAInfo), and Emergency Response Notification system (ERNS).

Data Source: EPA Regional offices.

QA/QC Procedures: All the systems have been developed in accordance with the Office of Information Management's Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third-party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: Regarding AFS, EPA Inspector General (IG) reports in 1997 and 1998 highlighted states' problems with identifying and reporting significant violators of the Clean Air Act, impairing EPA's ability to assess non-compliance. EPA issued High Priority Violator Guidance to improve tracking of sources of violations. As a result of the reports, EPA has enhanced oversight and headquarters' outreach to regions, states, local areas.

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. Additionally, there are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. In addition, the target is based on a preliminary estimate of the impact of redirecting resources to the state and tribal enforcement grant program.

New & Improved Data or Systems: PCS modernization is underway. EPA is preparing Quality Management Plans (data quality objectives, quality assurance project plans, baseline assessments) for all major systems. A new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. A pilot project to develop statistically valid compliance rates is underway.

Performance Measure (PM): Conduct EPA-assisted inspections to help build state program capacity.

Performance Database: Output measure; internal regional tracking system.

Data Source: Internal regional tracking system.

QA/QC Procedures: Regional and headquarters' managers check information to confirm accuracy.

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure (PM): Ensure that enforcement and compliance data is reported in 14 national information systems to provide Federal and state programs accurate and timely data through which environmental and human health problems can be identified.

Performance Database: No database; internal tracking of measure.

Data Source: None

QA/QC Procedures: None

Data Limitations: None.

New & Improved Data or Systems: None

FY 2003 Congressional Performance Measure (PM): Design and develop Phase II of ICIS (i.e., modernization of Permit Compliance System) by September 2003.

Performance Database: No database; internal tracking of measure.

Data Source: None

QA/QC Procedures: Contained within the project design

Data Quality Review: None

Data Limitations: None

New & Improved Data or Systems: None

Performance Measure (PM): EPA will respond to 100% of the following activities: investigative lease that relate to the security of homeland environment, FBI requests for investigative, forensic or technical support; and participations in all National Special Security Events (NSSE) identified by the Office of Homeland Defense, as requested by the Secret Service.

Performance Databases: The Criminal Docket System (CRIMDOC) is a criminal case management, tracking and reporting system. Information about criminal cases investigated by the U.S. EPA-CID (Criminal Investigation Division) is entered into CRIMDOC at case initiation, and investigation and prosecution information is tracked until case conclusion.

Data Source: U.S. EPA-CID offices.

QA/QC Procedures: The system administrator performs regularly scheduled quality assurance/quality control checks of the CRIMDOC database to validate data and to evaluate and recommend enhancements to the system.

Data Quality Review: N/A

Data Limitations: N/A

New & Improved Data or Systems: A new case management, tracking and reporting system (Case Reporting System) is currently being developed that will replace CRIMDOC. This new system will be a more user-friendly database with greater tracking, management and reporting capabilities.

Coordination with Other Agencies

The Enforcement and Compliance Assurance program coordinates closely with the Department of Justice (DOJ) on all enforcement matters. In addition, the program coordinates with other agencies on specific environmental issues as described below.

The Civil Enforcement and Compliance Monitoring program coordinates with the Chemical Safety and Accident Investigation Board. the Occupational Safety and Health Administration, and Agency for Toxic Substances and Disease Registry in preventing and responding to accidental releases and endangerment situations; with the Bureau of Indian Affairs on tribal issues relative to compliance with environmental laws on Tribal Lands, and with the Small Business Administration on the implementation of the Small Business Regulatory Enforcement Fairness Act (SBREFA).

The Water Enforcement and Compliance Monitoring program coordinates with the U.S. Army Corps of Engineers on wetlands. Moreover, due to changes in the Food Security Act, the U.S. Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS) has a major role in the determination of whether areas on agricultural lands meet the definition of wetlands and are therefore regulated under the Clean Water Act. Civil Enforcement coordinates with USDA/NRCS on these issues also. Finally, the program coordinates closely with the Department of Agriculture on the implementation of the Unified National Strategy for Animal Feedlot Operations.

The Toxics and Pesticides Enforcement and Compliance Monitoring program coordinates with USDA on food safety issues arising from the misuse of pesticides, and shares joint jurisdiction with Federal Trade Commission (FTC) on pesticide labeling and advertising. EPA and the Food and Drug Administration (FDA) share jurisdiction over general purpose disinfectants used on non-critical surfaces and some dental and medical equipment surfaces (e.g., wheelchairs). Finally, the Agency has entered into a Memorandum of Understanding with the Department of Housing and Urban Development concerning lead poisoning.

The Criminal Enforcement program coordinates with other federal law enforcement agencies (i.e. FBI, Customs, Treasury, U.S. Coast Guard, DOJ) and with state and local law enforcement organizations in the investigation and prosecution of environmental crimes. EPA is also actively working with DOJ to establish task forces which bring together federal, state, and local law enforcement organizations to address environmental crimes. In addition, the National Enforcement Training Institute has an Interagency Agreement with the Department of Treasury to provide specialized criminal environmental training to federal, state, local, and tribal law enforcement personnel at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA. NETI also coordinates with four state associations who provide training for state and local officials.

Under Executive Order 12088, EPA is directed to provide technical assistance to other Federal agencies to help ensure their compliance with all environmental laws. The Federal Facility Enforcement Program coordinates with other Federal agencies, states, and local and tribal governments to ensure compliance by federal agencies with all environmental laws.

The Civil Enforcement and Compliance Monitoring programs work closely with the states and tribes. States perform the vast majority of inspections and enforcement actions. Most EPA statutes envision a partnership between EPA and the states under which EPA develops national standards and policies and the states implement the program under authority delegated by EPA. If a state elects not to take delegation of a program, EPA has a mandatory duty to implement that program in the state. Historically, the level of delegation has increased as programs mature and state capacity has expanded, and many of the key environmental programs are approaching full delegation. EPA will increase its effort to coordinate with states on training and capacity building and on enforcement.

EPA works directly with Canada and Mexico bilaterally and in the trilateral Commission for Environmental Cooperation (CEC). EPA's border activities require close coordination with the U.S. Customs Service, the Fish and Wildlife Service, the Department of Justice, and the States of Arizona, California, New Mexico, and Texas.

Statutory Authorities

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act sections 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act sections 113, 114, and 303 (42 U.S.C. 7413, 7414, 7603)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act sections 325 and 326 (42 U.S.C. 11045, 11046)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

North American Agreement on Environmental Cooperation

1983 La Paz Agreement on US/Mexico Border Region

National Environmental Policy Act (NEPA) section 102(f)

Pollution Prosecution Act of 1990 (42 U.S.C. section 4321 note)

A Credible Deterrent to Pollution and Greater Compliance with the Law

Objective: Promote Compliance Through Incentives and Assistance.

EPA and its state, tribal, and local partners will promote the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Promote Compliance Through Incentives and Assistance.	**$56,396.7**	**$55,768.5**	**$55,872.4**	**$103.9**
Environmental Program & Management	$51.367.9	$52.953.9	$53.043.0	$89.1
Hazardous Substance Superfund	$899.9	$605.3	$620 1	$14 8
State and Tribal Assistance Grants	$4.128 9	$2,209.3	$2,209.3	$0.0
Total Workyears	419.0	416.6	398.1	-18 5

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Administrative Services	$677.2	$0 0	$0 0	$0 0
Capacity Building	$540 0	$614 0	$929 7	$315.7
Compliance Assistance and Centers	$24.228.3	$25.328 7	$24.728.7	($600.0)
Compliance Incentives	$10,071.8	$9.810 7	$9.397 3	($413.4)
Facilities Infrastructure and Operations	$3.326.7	$5,336.7	$5.724.0	$387.3
Legal Services	$239 7	$296 0	$321 0	$25.0
Management Services and Stewardship	$276.4	$860.4	$1.004 0	$143.6
NEPA Implementation	$10,847 5	$11,280 6	$11.548 4	$267.8
Public Access	$179 3	$0.0	$0 0	$0.0
Regional Management	$8 3	$32 1	$10 0	($22.1)
Sector Grants	$2.209.3	$2,209.3	$2.209 3	$0.0

FY 2003 Request

The enforcement and compliance assurance program uses voluntary compliance incentives and assistance to increase compliance with regulatory requirements and reduce adverse public health and environmental problems. By providing compliance incentives to the regulated community, the Agency motivates and enhances the capacity of the regulated community to fully comply with the law and to voluntarily and promptly disclose and correct violations before they come to the attention of the government.

The Agency also provides compliance assistance to the regulated community. By providing clear and consistent descriptions of regulatory requirements and information on how to comply, EPA assures that the community understands its obligations. Compliance assistance can also help regulated industries find cost-effective ways to comply with environmental requirements through the use of pollution prevention and innovative technologies and enable states to provide assistance to their constituencies.

In FY 2003, the Agency will continue to carry out its responsibilities under National Environmental Policy Act (NEPA), which requires that Federal agencies consider the environmental consequences of their activities. EPA prepares NEPA environmental reviews for its proposed actions, and under '309 of the Clean Air Act and NEPA, EPA reviews major actions taken by other federal agencies to ensure that adverse environmental effects are identified and either eliminated or mitigated.

Compliance Incentives

The program will continue to implement EPA's Audit/Self-Policing Policy, Small Business Compliance Policy, and Small Communities Policy as core elements of the enforcement and compliance assurance program. EPA developed its Audit/Self-Policing Policy in 1995 to encourage corporate audits and subsequent correction of self-discovered violations, and to provide a uniform enforcement response toward disclosures of violations. Under the Audit Policy, violations are discovered through voluntary environmental audits or a compliance management system, and are promptly disclosed and expeditiously corrected. EPA will reduce gravity-based penalties by 75% for violations that are voluntarily discovered, and are promptly disclosed and corrected, even if not found through a formal audit or compliance management system. The Policy also restates EPA's long-held policy and practice to refrain from using corporate prepared environmental audit reports as a basis for enforcement actions.

EPA is currently working on many efforts to encourage corporate self-disclosures, including efforts in the telecommunications, petroleum, and iron and steel industries. As of March 1, 2001, approximately 1,150 companies have disclosed potential violations at 5,400 facilities. The Agency

will continue to expand use of the Audit Policy through aggressive outreach to particular industries. EPA is particularly interested in encouraging disclosures at multiple facilities owned by the same regulated entity because such disclosures allow regulated entities to review their operations holistically, benefit the environment, and effectively leverage resources of the Agency.

The EPA Policy on Compliance Incentives for Small Business is intended to promote environmental compliance among small businesses by providing them with special incentives such as penalty reductions to use compliance assistance and other voluntary means to identify, disclose, and correct violations. EPA has worked with stakeholders to modify the policy to encourage greater participation. As part of its 2003 marketing and outreach activities for this approach, EPA will work with small business compliance assistance providers to develop tools useful to small businesses in understanding applicable environmental requirements and help businesses take advantage of the flexibility offered by the policy. EPA plans to revise its Small Communities Policy which encourages states to provide flexibility to small communities seeking assistance in addressing environmental problems. EPA wants to identify more incentives for states to adopt the policy and communities to utilize the policy.

In FY 2003 the Compliance Incentives program will continue to promote the use of environmental management systems (EMS), including ISO 14001. EMSs offer companies and other regulated entities an innovative approach to managing their environmental impacts by integrating environmental concerns into business decisions and practices. EPA will continue to work with a variety of domestic and international stakeholders, including the North American Commission for Environmental Cooperation, other federal agencies, state and local governments, industry, and non-governmental organizations, to promote the use of EMSs and to explore ways in which regulators can encourage the use of EMSs to boost environmental performance.

The enforcement and compliance assurance program will also continue to work on implementing the first tier of the two-tiered National Environmental Performance Track program. This first tier, The National Environmental Achievement Track (NEAT) is a program designed to motivate and reward companies and other regulated entities that are top environmental performers, recognize facilities that have consistently met their legal requirements, implemented environmental management systems (EMS), and made tangible environmental performance improvements. Entry criteria include showing established implementation of an EMS, presenting a record of continued compliance and certifying to current compliance, demonstrating specific environmental achievements and committing to future improvements, and committing to public outreach and annual performance reporting (including summaries of compliance audit findings). Incentives for participation include Agency recognition, lowered priority for routine inspection targeting, access to Audit Policy penalty mitigation and recognition of good faith participation in the program in any discretionary penalty assessment, as well as programmatic benefits still under development. The enforcement and compliance program's low inspection priority incentive was the first flexibility offered as an incentive to NEAT participants. The enforcement and compliance assurance program will also continue to participate in the development of the program's second tier, the Stewardship Track, which will be designed to recognize broader and higher levels of environmental performance.

In addition, the enforcement and compliance assurance program will continue to participate in Project XL (eXcellence in Leadership) projects, projects under the EPA/state regulatory innovation agreement, and other reinvention partnerships. The enforcement program will focus on ensuring these projects are legally enforceable where necessary, and provide accountability and transparency for participants (including Federal and non-Federal facilities). The program will also assist in verifying and evaluating project results.

The enforcement and compliance assurance program is funding the enhancement and transfer of the innovative Massachusetts Environmental Results Program (ERP). ERP is a self-certification program that replaces individual facility permits with a set of multi-media industry-wide performance standards and a facility-derived annual certification of compliance. ERP has improved performance for small business sectors and resulted in savings for these business, allowing the State and EPA to focus resources on priority environmental problem. In FY 2003, the enforcement and compliance assurance program is dedicating funding and other resources towards this effort. OECA will also provide technical and legal assistance to states developing an ERP, as well as continuing work on transferring the successful components of ERP to other sectors.

The enforcement and compliance program will also work to enhance market incentives for responsible environmental performance. Disclosure of environmental information promotes responsible behavior and ensures that markets value environmental performance. The United States' federal securities regulatory system relies on registrants' full disclosure of various kinds of information, including the registrant's environmental liabilities, to actual and potential shareholders as the primary means of ensuring informed investments and the proper functioning of the market. EPA's enforcement and compliance assurance program recently began notifying parties to some EPA-initiated administrative enforcement actions of their potential duty to disclose the proceeding to the Securities and Exchange Commission (SEC). In FY 2003, the enforcement and compliance assurance program will continue to collect data on the extent of disclosures of environmental liabilities and whether there is an increase in disclosures once EPA began providing notices to potential SEC registrants. EPA's enforcement and compliance assurance program will also explore ways to link potential investors to SEC resources so that they can determine whether registered companies are adequately disclosing their environmental liabilities.

Compliance Assistance

The program provides information and technical assistance to the regulated community to increase its understanding of all statutory and regulatory environmental requirements, thereby reducing risk to human health and the environment and gaining measurable improvements in compliance. To support improving compliance in specific industrial and commercial sectors or with certain regulatory requirements, the program will continue to develop strategies and compliance assistance tools and provide these to the regulated community. Compliance tools developed range from plain-language guides to comprehensive sector-based documents (such as the Sector Notebooks that include information on industry-specific manufacturing processes and pollution issues) to statute-based environmental audit protocol manuals to fact sheets, checklist, newsletters, and web-based clearinghouse interactive compliance assistance centers.

Moreover, in FY 2003, the program will continue with activities that more strategically tailor EPA's role in direct delivery of compliance assistance, to focus on targeted initiatives for particular sectors, or environmental problems and integrated compliance assurance strategies. The Agency would like to emphasize its role as a Awholesaler@ of information by distributing and marketing tools through a network of compliance and technical assistance providers that work more directly with the regulated community. These activities include (1) convening a compliance assistance exchange forum, composed of public and private sector representatives, to share information on best practices, priority setting, outcome measurement on recently-promulgated regulations and new compliance assistance materials and (2) maintaining and enhancing a clearinghouse of compliance assistance materials available from federal, state and local governments and from trade associations. EPA intends that all new compliance assistance materials will be added to the Clearinghouse within 30 days of receipt. Through public outreach and communication efforts, including press releases and newsletters, EPA will publicize all major compliance assistance efforts. EPA will also continue its efforts to reach out to stakeholders to identify compliance assistance needs and priorities. EPA will work on the Compliance Assistance Activity Plan to guide the agency's compliance assistance activities.

The Sector Facility Indexing Project (SFIP) will be continued in FY 2003. SFIP allows the public to monitor the records of nearby facilities, provides the regulated community with a means of comparing performance against competitors, and assists government agencies in making cross-media comparisons. EPA is committed to increasing use of the SFIP by increasing public awareness of the project, ensuring customer satisfaction with the information provided, and sustaining the utility of the SFIP as a compliance and analytical tool.

EPA will continue to support the ten Compliance Assistance Centers, a key component of EPA's efforts to help small and medium-sized businesses better understand and comply with Federal environmental requirements. The centers provide small businesses in selected industry sectors one-stop shopping for regulatory and technical assistance, pollution prevention activities, and other information particularly suited to the individual industries. Operated in partnership with industry associations, environmental groups, universities and other government agencies, the centers are accessible through Internet web sites as well as toll-free telephone assistance lines. The agency will continue to develop and improve the Compliance Assistance Center Platform (Platform) to launch new sector-specific, topical, or geographic Internet-based Compliance Assistance Centers (Centers). The Platform provides a suite of comprehensive web-based tools necessary to create new, full-featured Centers. The Platform will ensure efficient integration of technology and content and reduce the financial barriers to creating new Centers. Under a cooperative agreement with EPA, the National Center for Manufacturing Sciences (NCMS) will develop and operate the Platform and collaborate with industry, states, tribes, and compliance assistance providers to establish Centers that help the regulated community better understand and more efficiently comply with environmental requirements. The Platform will support the: 1) improvement or expansion of Platform tools and services; 2) development of new Centers; 3) development and coordination of state regulatory compliance assistance material.

- Improvement of Platform Services: NCMS will assess user satisfaction of the Platform services over time. Funds will be used to implement suggested services or improve existing services. Funds may also be expended to support the modernization of the Platform infrastructure as web-based technologies change.

- Development of New Centers: Funds will enable industry sectors populated with small businesses to develop sector or topic-specific content for incorporation into new Centers. The sector or topic experts will be provided the latitude to develop compliance assistance materials that best address their compliance issues and meet the users' needs.

- Development of State Regulatory Compliance Assistance Material: Funds will enable the Platform to not only help small businesses identify and comply with their Federal regulatory obligations, but also to address their state regulatory obligations. For example, the Platform can identify state regulatory obligations associated with activities that occur at many small businesses (e.g., used oil management, wastewater treatment). The state regulatory information can serve as content for multiple new sector- or topic-specific centers.

The Agency will also provide sector-based materials and services and training sessions to the regulated community to improve industry's regulatory and technical knowledge and work to better incorporate compliance assistance into the rulemaking process. EPA will promote adoption of innovative technologies, including waste minimization. In FY 2003, EPA plans to provide compliance assistance to 475,000 entities. The Agency will also continue to work with the compliance assistance advisory committee in identifying new approaches and directions for the national compliance assistance program.

To improve its ability to measure the effectiveness of its various strategies in improving compliance and environmental results, EPA has tested methodologies designed to measure behavioral change resulting from targeted compliance assistance. EPA's goal is for 50% of the recipients of compliance assistance from funded pilot projects to have improved their use or handling of pollutants or improved their facility management practices or information as a result of the assistance received.

Consistent with its Indian Program Strategy, the Agency will assist Tribes in developing their own compliance assistance programs. In FY 2003, EPA will continue its programs to assist Tribes in addressing solid waste management problems.

The Compliance Assistance program disseminates information to the public and regulated community on important environmental issues, trends, and significant enforcement actions. This assistance (e.g., enforcement alert publications, slide presentations to industry) is designed to help the regulated community anticipate and prevent violations of federal environmental laws that could otherwise lead to enforcement actions.

EPA has maintained a sector based multi-media assistance program to States and Tribes over the past several years to both build and foster innovations in compliance. The Agency focused this multi-media program in three areas: 1) Data Quality / Data Modernization; 2) Public Access to Enforcement and Compliance Assurance Data; and 3) Compliance Assistance Outcome Measurement. Each of these three funding priorities was selected and designed to enhance State and Tribal capability and capacity in emerging areas. EPA competitively awarded funds through grants or cooperative agreements, in the $50 to $200 thousand range.

EPA intends to continue supporting the development of performance measurement within State and Tribal governments. The projected outcomes of the awards will be the enhanced capability of States and Tribes to assess the effectiveness of their efforts through improved compliance rates; reductions in pollutants released to the environment and citizens served.

The Federal facility enforcement program will continue to provide technical guidance to other Federal agencies concerning their implementation of executive orders and environmental programs, as well as providing guidance on complying with pollution prevention law requirements and applicable environmental laws at Federal facilities. EPA will maintain and expand the Federal Facility Compliance Assistance Center to deliver compliance assistance to Federal agencies concerning new regulatory requirements. EPA will develop and deliver compliance assistance for new major EPA regulations and Executive Orders in selected program areas. EPA will work with other Federal agencies on implementing the Federal Code of Environmental Management Principles (CEMP) through agency- or bureau-wide environmental management system assessments and environmental management reviews at specific federal facilities. EPA will also support pollution prevention opportunity assessments and similar evaluations at Federal facilities.

National Environmental Policy Act (NEPA) Implementation

The program reviews environmental impacts of proposed major federal actions as required by NEPA, '309 of the Clean Air Act, the Antarctic Science, Tourism, and Conservation Act (ASTCA), and the Executive Order on environmental justice; and develops policy and technical guidance on issues related to NEPA, the Endangered Species Act, the National Historic Preservation Act and relevant Executive Orders. The program emphasizes cooperation with other Federal agencies to ensure compliance with applicable environmental laws and better integration of pollution prevention and ecological risk assessment into their programs, while targeting high impact federal program areas, such as water resources and transportation/energy related projects. In FY 2003 the Agency will continue to work with other federal agencies to streamline and improve their NEPA process in such key areas as approvals of highways and airport expansions, disposition of mercury and chemical weapons stockpiles, hydro-power/nuclear power plant relicensing and other energy-related projects, flood control and port development projects, and management of national forests and public lands. In FY 2003, EPA will review all major proposed federal actions under NEPA and achieve successful mitigation for at least 70 percent of the adverse environmental impacts resulting from those actions in order to preserve air and water quality, wetlands, aquatic and terrestrial habitats, and endangered species; protect Environmental Justice communities; and prevent degradation of other environmental values. The program also manages the Agency's official filing

activity for all federal Environmental Impact Statements (EIS) in accordance with a Memorandum of Understanding with the Council on Environmental Quality.

The NEPA Implementation program also guides EPA's own compliance with NEPA and other applicable statutes, and related environmental justice requirements. These efforts include EPA-issued new source National Pollutant Discharge Elimination System (NPDES) permits where a state/tribe has not assumed the NPDES program, for off-shore oil and gas sources, for Clean Water Act (CWA) wastewater treatment plant grants, and for special appropriation grants for wastewater, water supply and solid waste collection facilities. In FY 2003 EPA will review and document 100 percent of the water treatment facility grants and water discharge permits subject to NEPA to ensure that impact of construction will not adversely affect the environment.

FY 2003 Change from FY 2002 Enacted

EPM

- (-$1,78,000, -17.8 FTE) Reduction to support the new multimedia enforcement grant program to the states.

Annual Performance Goals and Measures

Compliance Incentives

In 2003 Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

In 2002 Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

In 2001 EPA increased opportunities through targeted sector initiatives for industries to use one of the self-disclosure policies

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Facilities voluntarily self-disclose and correct violations with reduced or no penalty as a result of EPA self-disclosure policies	1754	500	500	Facilities
Increase opportunities for corporate-wide voluntary self-disclosure through targeted sector initiatives			2	initiatives

Baseline: EPA developed its Audit/Self-Policing Policy in 1995 to encourage corporate audits and subsequent correction of self-discovered violations That Policy as well as the Small Business Compliance Policy were modified in FY00. The Agency is working to expand the use of the Audit Policy through aggressive outreach to specific sectors In FY01 the performance measure was modified to reach settlements with 500 facilities to voluntarily self-disclose and correct violations. This same measure has been carried continued.

Regulated Communities

In 2003 Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides

In 2002 Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides.

In 2001 EPA continued to expand the compliance assistance program for the regulated community

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
EPA will complete 80% of the compliance assistance tools listed in the previous year's compliance Assistance Activity Plan			80	Percent
50% of recipients of compliance assistance from funded assistance pilot projects will increase their understanding of environmental requirements or facility management practices (Core optional)			50	Percent
Number of facilities, states, technical assistance providers or other entities reached through targeted compliance assistance (core optional)	550,000	500,000	475,000	Entities
Develop compliance assistance tools listed in the Compliance Assistance Plan	203	150		Tools
Number of tribally owned/managed entities reached through the Agency's targeted compliance assistance.	249	30	30	entities
70% of survey respondents find the Compliance Assistance Center useful to very useful in helping them understand applicable environmental regulations			70	percent
60% of survey respondents took an action, in whole or in part, due to information found through Center services or resources			60	percent

Baseline EPA provides clear and consistent descriptions of regulatory requirements to assure that the community can understand its obligations. EPA supports initiatives targeted toward compliance in specific industrial and commercial sectors or with certain regulatory requirements Compliance assistance tools range from plain-language guides, fact sheets, checklists and newsletters New distribution methods include the on-line Clearinghouse In FY03, EPA is planning to reach 475,000 facilities, states, or technical assistance providers through targeted compliance assistance efforts

Verification and Validation of Performance Measures

FY2003 Congressional Performance Measure (PM): Facilities voluntarily self-disclose and correct violations with reduced or no penalty as a result of EPA self-disclosure policies.

Performance Database: Headquarters manages information on the self-disclosing policies in the DOCKET.

Data Source: Headquarters and the Regions enter the information. The data for Docket is generated through the use of the Case Conclusion Data Sheet (CCDS), which is prepared by Agency staff after the conclusion of each criminal and civil (judicial and administrative) enforcement action. The CCDS was implemented by EPA in 1996 and captures the relevant information on the results and environmental benefits of the concluded enforcement cases. Docket was modified to collect information on the self-disclosing policies.

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

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

Data Limitations None

New & Improved Data or Systems: Docket is now collecting information on the self-disclosing policies after it was modified. These policies were tracked in Docket beginning in FY 2000.

FY 2003 Congressional Performance Measure (PM): Number of facilities, states, technical assistance providers or other entities reached through targeted compliance assistance.

Performance Database: Headquarters manages data on the number of entities reached through targeted compliance assistance in the Reporting Compliance Assistance Tracking System (RCATS).

Data source: Headquarters and the Regions enter information in RCATS upon completion and delivery of media and sector-specific compliance assistance including workshops, training, on-site visits and distribution of compliance assistance tools. RCATS is designed to capture outcome measurement information such as increased awareness/understanding of environmental laws, changes in behavior and environmental improvements as a result of the compliance assistance provided.

QA/QC: Automated data checks and data entry guidelines are in place for RCATS.

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

Data Limitations: None

New & Improved Data or Systems: N/A

Coordination with Other Agencies

The Compliance Assistance program and the U.S. Department of Agriculture (USDA) have created an Agricultural Compliance Assistance Center. The program has in place two Interagency Agreements with USDA to award funds to Land Grant Universities to develop compliance and pollution prevention materials.

The Compliance Assistance program works, in addition, with US Customs to ensure safe import and export of hazardous and toxic materials.

The Compliance Incentives and Assistance program works closely with the states as they provide an increasing amount of compliance incentives and assistance. The compliance assistance centers have been coordinating with the states to assist them in their outreach efforts to industry, to facilitate their delivery of sector-specific regulatory information, to serve as the delivery mechanism

for their pollution prevention and compliance assistance material, and to build their capacity to meet the environmental needs of the businesses in their states and localities.

The Enforcement program works with states prior to and following enactment of state audit privilege and immunity legislation to identify and express the Agency's policy and legal concerns. EPA has adopted a pragmatic, problem-solving approach to addressing legal adequacy in specific states that have enacted audit privilege and immunity laws. EPA and the state use a process under which they identify any legal impediments to federal program authorization resulting from the state's law The impediments can then be addressed through tailored statutory amendments, or a state Attorney General opinion interpreting the law consistent with federal requirements, or both. EPA has completed this process in ten states Arkansas, Indiana, Michigan, Minnesota, Ohio, South Dakota, Texas, Utah, Virginia, and Wyoming, an increase of four states during the past year.

The Enforcement program also works with the Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) on activities to encourage increased disclosure of corporate environmental performance information by public companies. The SEC and DOJ have reviewed EPA research on the level of compliance with SEC environmental disclosure regulations. They also commented on an EPA notice to be distributed in administrative enforcement actions, which informs publicly-traded companies of their duty to disclose environmental legal proceedings pursuant to SEC regulations.

The Agency is required to review the environmental impact statements (EIS) and other major actions impacting the environment and public health proposed by all federal agencies, and makes recommendations to the proposing federal agency on how to remedy/mitigate those impacts. Although EPA is required under ' 309 of the Clean Air Act (CAA) to review and comment on proposed federal actions, neither the National Environmental Policy Act nor ' 309 CAA require a federal agency to modify its proposal to accommodate EPA's concerns, although EPA has authority under these statutes to refer major disagreements with other federal agencies to the Council on Environmental Quality (CEQ). Accordingly, many of the beneficial environmental changes or mitigation that EPA recommends must be negotiated with the other federal agency. The majority of the actions EPA reviews are proposed by the Forest Service, Department of Transportation (including Federal Highway Administration and Federal Aviation Administration), Army Corps of Engineers, Department of the Interior (including Bureau of Land Management, Minerals Management Service and National Park Service), Department of Energy (including Federal Regulatory Commission), and Department of Defense.

Statutory Authorities

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act section 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act section 113, 114, 303, and 309 (42 U.S.C. 7413, 7414, 7603, 7609)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act section 325 and 326 (42 U.S.C. 11045, 11046)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

National Environmental Policy Act (NEPA)

Antarctic Science, Tourism, and Conservation Act (ASTCA)

Endangered Species Act (ESA)

National Environmental Policy Act (NEPA)

Antarctic Science, Tourism, and Conservation Act (ASTCA)

Endangered Species Act (ESA)

National Historic Preservation Act (NHPA)

Goal 10: Effective Management X-1
Provide Leadership X-8
Manage for Results Through Services, Policies, and Operations X-11
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Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Effective Management

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

Resource Summary
(Dollars in thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Effective Management	**$445,611.9**	**$454,968.1**	**$460,963.2**	**$5,995.1**
Provide Leadership	$40,847.0	$47,207.9	$49,767.0	$2,559.1
Manage for Results Through Services, Policies, and Operations.	$178,771.0	$186,431.5	$201,462.0	$15,030.5
Provide Quality Work Environment.	$177,971.0	$169,367.3	$156,141.5	($13,225.8)
Provide Audit, Evaluation, and Investigative Products and Services	$48,022.9	$51,961.4	$53,592.7	$1,631.3
Total Workyears	2,129.2	1,999.2	1,943.7	-55.5

Background and Context

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

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

Work under this goal ensures that EPA's management systems and processes, and its programs are supported by independent evaluations that promote operational integrity and efficient and effective programs allowing us to obtain the greatest return on taxpayer investments, and to prevent and detect fraud, waste and mismanagement.

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

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

The performance of this Goal is designed to provide the leadership and services that enable EPA program offices to reach their environmental protection goals in an efficient and effective manner. The effectiveness of EPA's management and the delivery of administrative services will determine, in large measure, how successful we are in achieving the Agency's environmental mission. The Agency must continue to improve the quality and delivery of its services. Instead of the traditional command and control strategies, many emerging issues require increased cooperation and coordination with states, tribes, industry and other partners. Agency management and program operations will be independently evaluated to promote economy, efficiency, and effectiveness, and to prevent and detect fraud, waste, and mismanagement.

EPA is also actively working to align its management objectives more closely with those of the President's Management Reform Agenda. EPA's strategy for providing effective management specifically addresses the major challenges facing the federal government as a whole:

- *Strategic Management of Human Capital:* The Agency is developing a comprehensive strategy to attract, develop and retain a workforce that is prepared to meet the Agency's future challenges.

- *Competitive Sourcing:* EPA submitted its Competitive Sourcing Plan to OMB as required and will hold competitions in FY 2002 and FY 2003 to meet the goals of the President's Competitive Sourcing Agenda.

- *Improved Financial Performance:* The Agency is making significant progress on the replacement of its aging financial management systems. EPA has also instituted a comprehensive strategy addressing all security-related deficiencies, and is implementing a process to eliminate a historical backlog in issuing National Pollutant Discharge Elimination Systems Permits (NPDES) by the end of FY 2005.

- *Budget and Performance Integration:* In FY 2003 the Agency will improve the quality of its performance goals and measures and restate them more closely to environmental outcomes across its goals.

- *E-Government:* (See Goal 7 for the discussion of the Agency's strategy for e-government issues.)

Means and Strategy

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

- Developing partnerships with stakeholders to ensure mutual goals are met;

- Promoting cost-effective investment in environmental protection and public health through sound stewardship and responsible results-based management. EPA works to achieve this goal through keeping pace with technological change, meeting accounting standards, consulting with customers and stakeholders, and improving delivery of services;

- Providing responsive and accountable management;

- Assessing management challenges and program risks identified by Congress, oversight agencies, EPA's OIG and State and Tribal partners;

- Committing to manage human resources; foster diversity; and work to secure, develop, empower, and retain talented people to accomplish the Agency's environmental mission;

- Investing in core infrastructure that promote energy efficiency and green procurement, and maintain a safe, healthy, and productive work environment;

- Implementing streamlined systems and processes in grants and contracts/management;

- Recognizing the special vulnerability of children and other sensitive sub-populations, such as older Americans, to environmental risks and facilitating the intensified commitment to protect children and the elderly.

EPA will continue to aggressively implement its action plan in support of the Agency's Strategy for Human Capital. This strategy will enable EPA to attract, retain and further develop a diverse workforce prepared to meet current and future challenges. Building on work that began in 1998, EPA's goals for human capital will focus on implementing a workforce planning model, completing a comprehensive pay review, and developing delivery systems and processes to enhance the training and development of EPA's workforce.

In continuing to provide a quality work environment that is energy conscious and values employee safety and security, the Agency will implement repair and improvement projects at several EPA facilities. These facilities provide the tools essential to research innovative solutions for current and future environmental problems and enhance our understanding of environmental risks. In FY 2003, EPA's goals in this area are aimed at reducing energy consumption at its facilities by encouraging the use of new and advanced technologies and energy savings performance contracts.

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

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

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

Strategic Objectives and FY 2003 Annual Performance Goals

Provide Leadership

Manage for Results Through Services, Policies, and Operations

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

Provide Quality Work Environment

Provide Audit and Investigative Products and Services

- Improve environmental quality and human health by recommending 75 improvements across Agency environmental goals, identifying and recommending solutions to reduce 20 of the highest environmental risks, and identifying 20 best environmental practices.

Manage for Results Through Services, Policies, and Operations

Highlights

EPA's efforts to meet what has been called the "Federal human resources crisis" has led to the development of a human resources strategic plan entitled *Investing in Our People, EPA's Strategy for Human Capital*. The Agency is committed to improve recruitment of individuals with mission-critical scientific and technical skills; to enhance training and development of senior executives and managers; and to improve retention of a diverse and high performing workforce. Several components of EPA's human capital strategy are currently underway or in development and include the EPA Intern Program; the Mid-level Development Program; the Management Development Program; and the SES Candidate Development Program. In FY 2003, the EPA will link these efforts to the Agency's strategic goals through completion of a comprehensive workforce planning model. Combined, these efforts will provide a comprehensive and dynamic approach to identifying, managing and developing the skills and competencies of EPA's future workforce.

The Agency continues to strengthen pre-award and post-award management of assistance agreements, and continues its transition toward electronic execution of grants internally. In addition, EPA will increase the number of contracts that are performance-based and will improve electronic commerce by providing electronic communication and contract management between EPA program offices and EPA contractors through the use of EPA's Program Office Interface System.

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

In FY 2003, EPA will build on its progress in linking resources to environmental results through goal-based fiscal resource management. The Agency will provide more useful cost accounting information for environmental decision making. EPA will make continued progress in assessing the environmental results of its program activities. Highlights of expected Agency FY 2003 achievements in effective management are:

- Expand Agency and State partner capacity to manage for results through support for the improvement of the quality and use of performance measures.

- Meet new Federal requirements for timely financial information and maintenance of a clean audit opinion on the Agency's financial statements to demonstrate the highest caliber of resource stewardship and the credibility and reliability of Agency financial information.

- Continue efforts to provide decision-makers with integrated cost and performance information to support results-based management and progress on environmental priorities. FY 2003 efforts will focus on:

  - completing the implementation plan for a new payroll system that will reduce costs and burdens,
  - making recommendations for replacing EPA's integrated financial management system,
  - further developing desk-top access to key cost accounting and performance information.

The Office of Inspector General will conduct and supervise independent and objective audits, evaluations, and investigations relating to Agency management and program operations, and will provide advisory and assistance services. The OIG will also review and make recommendations regarding existing and proposed legislation and regulations impacting the Agency. In addition, program evaluations/audits and four other types of audits will be conducted: contract, assistance agreement, financial statement, and systems audits. Four types of investigations will be performed: program integrity, assistance agreement, contract and procurement, and employee integrity. The OIG Computer Crimes Unit will conduct investigations of computer intrusions, support the OIG and Agency personnel as a Penetration Testing Laboratory, and provide a Forensics Laboratory to assist with OIG investigations. Combined, these activities promote economy, efficiency, and effectiveness within the Agency, prevent and detect fraud, waste, and abuse, and contribute to improved environmental quality and human health. The OIG will keep the EPA Administrator and Congress fully informed of problems and deficiencies identified in Agency programs and operations and the necessity for corrective actions.

In FY 2003, the OIG will also receive, analyze, and facilitate the resolution of citizen's complaints regarding Agency programs and activities, as part of the Ombudsman function. The Ombudsman performs the OIG Hotline function, and is responsible for the review of public complaints about Agency programs and activities.

The Agency's building operations and new construction budget ensures a healthy, safe and secure work environment for its employees and integrates energy conservation, green procurement, and state-of-the-art technology into its daily activities. In FY 2003, the Agency will expand its focus on improving EPA's infrastructure by implementing repair, improvement and energy conservation projects at several EPA facilities. These facilities provide the tools essential for researching

innovative solutions to current and future environmental problems and for enhancing our understanding of environmental risks.

In FY 2003 the Agency will also respond to an increased need to provide a secure working environment for all its employees. The EPA is undertaking a comprehensive security assessment of all EPA facilities nationwide, and will upgrade existing interior and exterior security features as necessary, and provide a more comprehensive and better-equipped security force.

EPA will continue its commitment to protect children's health. The Agency will direct resources toward the programs that reduce risks to children from a range of environmental hazards. In FY2003, the Agency will develop Comprehensive School Environmental Health Guidelines. The Agency will continue to work to decrease the frequency and severity of asthma attacks in children through reduction and avoidance of key asthma triggers, including environmental tobacco smoke, prevalent indoor allergens and ambient air pollution. The Agency will continue efforts to reduce children's exposure to lead, particularly in low income minority neighborhoods, where children living in older housing are much more likely to be exposed to lead. Additionally, the Office of Children's Health Protection will launch a new initiative to improve the Agency's base of knowledge regarding the link between environmental exposure and senior citizens' health through an analysis of the issues, and in consultation with EPA Programs and the Department of Health and Human Services, will develop a draft action strategy, detailing research needs and other actions that are necessary to safeguard elders from adverse health effects from environmental threats.

External Factors

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

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

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Effective Management

Objective: Provide Leadership

Provide vision, national and international leadership, executive direction, and support for all Agency programs.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Provide Leadership	**$40,847.0**	**$47,207.9**	**$49,767.0**	**$2,559.1**
Environmental Program & Management	$40,847.0	$47,207.9	$49,767.0	$2,559.1
Total Workyears	283 2	306.8	311.4	4.6

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req v. FY 2002 Ena.
Administrative Law	$2,567.3	$2,684.0	$2,869 8	$185.8
Administrative Services	$298 3	$0 0	$0 0	$0.0
Childrens Health. Program Development and Coordination	$6,036.9	$6,099.0	$6,670.9	$571.9
Civil Rights/Title VI Compliance	$9,140.1	$10,143.6	$11,770.7	$1,627.1
Environmental Appeals Boards	$1,553.1	$1,667.3	$1,737.7	$70.4
Executive Support	$2,752.1	$3,113.0	$3,037 6	($75 4)
Facilities Infrastructure and Operations	$2,494.4	$5,226.9	$4,492.7	($734 2)
Immediate Office of the Administrator	$3,994.1	$4,175.9	$4,343.7	$167.8
Intergovernmental Relations - OA	$1,847.8	$2,167.4	$2,292.7	$125.3
Legal Services	$3,369 4	$3,979 2	$4,360 4	$381.2
Management Services and Stewardship	$0 0	$405.1	$430.6	$25.5
Regional Management	$6,780.3	$7,546.5	$7,760.2	$213 7

FY 2003 Request

Americans are challenging their leaders to adopt tough but achievable goals for the environment, and to provide institutions and individuals with the tools and flexibility needed to achieve these goals in cost-effective ways. The Agency will provide the vision and leadership

needed to accomplish these objectives, and to enable the EPA to meet its commitments to protect public health and the environment in FY 2003.

In order to fulfill its mission fully and effectively, the Agency requires a strong internal support structure. This includes personnel, administrative, budget, planning, integrity, ethics, computer support, information management security, and financial management support. The Agency will assist its managers and supervisors in hiring a qualified and diverse staff in accordance with established affirmative action and human resource management programs and principles. This Agency must also provide the expertise, reports, financial analyses, program analyses, and related information that its managers need to make decisions, understand the resource implications of their management decisions; and to ensure that the Agency operates within its authorized funding levels. Automated data processing and information resource management support will also be provided to meet increasing information resource needs, as well as to develop and implement information management security policies needed to protect electronic data.

In FY 2003, policy direction and guidance will be provided within the Agency on equal employment opportunity, civil rights and diversity issues. The Agency will continue to work diligently to process all Title VII internal employment discrimination complaints. Appropriate training will be provided to Office of Civil Rights (OCR) staff to conduct Title VII counseling and investigations. EPA will continue to administer and monitor the implementation of affirmative employment programs. Furthermore, EPA will manage special emphasis programs designed to improve the representation, utilization, and retention of minorities, women, and persons with disabilities in the Agency's workforce. Finally, the external compliance, including Title VI of the Civil Rights Act of 1964, will prohibit discrimination in programs and activities that receive financial assistance from EPA. OCR will also issue Title VI guidance on limited English proficiency and develop a Title VI compliance review program.

The Environmental Appeals Board will issue final Agency decisions in environmental adjudications on appeal to the Board. The right of affected persons to appeal these decisions within the Agency is conferred by various statutes, regulations and constitutional due process rights. These decisions are the end point in the Agency's administrative enforcement and permitting programs.

The Administrative Law Judges (ALJs) will preside in hearings and issue decisions in cases initiated by EPA's enforcement program concerning those accused of environmental violations under various environmental statutes. The ALJs have increased their use, in recent years, of alternative dispute resolution techniques to facilitate the settlement of cases and, thereby avoid more costly litigation.

In FY 2003, the Agency will strengthen its commitment to protect children's health. The Agency will direct resources toward the programs that reduce risks to children from a range of environmental hazards, and will focus on research and analyses to provide scientific and economic information needed to address the heightened risks faced by children from environmental contaminants. The Agency will continue to work to decrease the frequency and severity of asthma attacks in children through reduction and avoidance of key asthma triggers, including environmental

tobacco smoke, prevalent indoor allergens and ambient air pollution. The Agency will continue efforts to reduce children's exposure to lead, particularly in low income minority neighborhoods where children living in older housing are much more likely to be exposed to lead. We will continue to build partnerships and work with other Federal agencies, states, health care providers, and international organizations to incorporate children's environmental health into their programs and activities. Additionally, the Agency will launch a new initiative to improve the Agency's base of knowledge regarding the link between environmental exposure and senior citizens' health.

FY 2003 Change from FY 2002 Request

EPM

- (+$1,107,800) This request reflects an increase to fully fund the Office of the Administrator's workforce costs, including increased workforce costs and workyears in the Office of Civil Rights that the Agency has experienced difficulties in filling in FY2002. It is anticipated that all positions will be filled in FY2003.

- (+$571,900 and +3.0 FTE) This increase reflects additional support for the Office of Children's Health Protection to address children's issues and to launch a new initiative to improve the Agency's base of knowledge regarding the link between environmental exposure and senior citizens' health.

Coordination with Other Agencies

The Administrator co-chairs, along with the Secretary of the Department of Health and Human Services, the Interagency Task Force on the Protection of Children from Environmental Health Risks. About 15 Federal cabinet departments, agencies and White House councils are members of the Task Force. EPA performs the staff work for the Task Force.

Statutory Authority

Administrative Procedure Act
Civil Rights Act of 1964, Title VI
Civil Rights Act of 1964, Title VII
Comprehensive Environmental Response, Compensation, and Liability Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Effective Management

Objective: Manage for Results Through Services, Policies, and Operations.

Demonstrate leadership in managing for results by providing the management services, administrative policies, and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities and mandates.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Manage for Results Through Services, Policies, and Operations.	**$178,771.0**	**$186,431.5**	**$201,462.0**	**$15,030.5**
Environmental Program & Management	$149,156.6	$152,852.9	$164,663.0	$11,810.1
Hazardous Substance Superfund	$28,781.4	$32,213.7	$35,352.7	$3,139.0
Leaking Underground Storage Tanks	$699.3	$1,143.4	$1,194.4	$51.0
Oil Spill Response	$6.2	$44.7	$53.2	$8.5
Science & Technology	$127.5	$176.8	$198.7	$21.9
Total Workyears	1,492.2	1,294.0	1,244.6	-49.4

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Brownfields	$0.0	$0.0	$231.1	$231.1
Environmental Finance Center Grants (EFC)	$1,249.0	$2,000.0	$2,000.0	$0.0
Facilities Infrastructure and Operations	$52,174.8	$50,675.0	$54,819.0	$4,144.0
Legal Services	$4,327.0	$4,614.5	$4,964.6	$350.1
Management Services and Stewardship	$62,643.5	$60,875.1	$67,328.8	$6,453.7
Planning and Resource Management	$47,567.1	$56,295.3	$62,791.1	$6,495.8
Public Access	$0.0	$1,429.0	$0.0	($1,429.0)
Regional Management	$7,587.4	$8,934.6	$7,725.1	($1,209.5)
Regulatory Development	$1,435.2	$1,608.0	$1,602.3	($5.7)

FY 2003 Request

In FY 2003, Agency activities to support results-based decision-making and sound financial stewardship include the following activities: Strategic Planning, Annual Planning and Budgeting, Financial Services, Financial Management, Analysis, and Accountability. Through these activities the Agency provides executive direction for the Agency's budget, financial, and resource management functions; develops and manages a results-based management system; manages the annual planning and budgeting process; provides financial accounting and fiscal services to the Agency; operates and maintains the Agency's integrated financial management system; provides support to the Agency's Superfund cost recovery efforts; prepares the annual financial statements and performance reports; and coordinates the planning and budgeting process for the Agency Working Capital Fund. In addition, EPA's Environmental Financing Program assists states and localities in meeting their critical environmental infrastructure needs in a sustainable manner. The program provides grants to a network of university-based Environmental Finance Centers which, in turn, provide training, expert advice, education, and analysis to states, local communities and small businesses. As part of Agency efforts to provide the American public with innovative, market-based programs and services, EPA actively reviews programs as part of its Federal Activities Inventory Reform Act process.

A key component of this objective is the Agency's management of contracts and grants which are used to support its environmental mission. The Agency will ensure a high level of integrity and accountability in the management of grants and contracts to protect Federal funds from waste, fraud, and abuse so taxpayers receive the full benefit of the government's investment in environmental protection. The Agency will continue to strive toward better pre-award and post-award management of assistance agreements. The Agency will continue efforts to improve monitoring and oversight of grants, including continued emphasis on onsite reviews of selected grantees. In addition, in FY 2003, EPA will strengthen our relationship with our State environmental partners by utilizing the Integrated Grants Management System (IGMS) to electronically award 15% of all State grants. These efforts will enhance the management of our grants to support environmental projects and continuing environmental programs.

EPA's environmental information efforts require the Agency to ensure that it's keeping pace with the states in the areas of data collection, management and utilization. Consequently, in FY 2003, EPA will emphasize its new state data management grants, both from an information technology and a grants management perspective. Additionally, EPA will continue to focus on information security and the need for each Region to have an internal information technology security capacity. Regions will implement Agency information resources management policies in areas such as data and technology standards, central data base services, and telecommunications. Regions will also operate Regional Centers for Environmental Information (RCEI) in both regional offices and laboratories. In addition, regional information technology organizations will provide support to local program offices in the areas of hardware requirements determination, software programming and applications, records management systems, data base services, LAN activities, intranet web design and desktop support.

Resources within this objective are aligned with four of the five initiatives outlined in the President's Management Reform Agenda: Strategic Management of Human Capital, Competitive Sourcing, Improved Financial Performance, and Budget and Performance Integration. The fifth initiative, E-Government, is discussed in Goal 7.

Strategic Management of Human Capital

The Government Accounting Office (GAO) has declared human capital a government-wide high-risk area and EPA has made it a priority by declaring it an Agency level weakness. In July 2001, after extensive review of EPA's human capital strategy, GAO recommended that EPA allocate sufficient resources and senior-level management attention to implement the initiatives outlined in its human capital strategy.

In FY 2003, the Agency will increase investment in its human capital efforts to ensure that EPA has the skills base and diverse workforce to accomplish its mission. Resources will be used to develop and implement a comprehensive workforce planning model. This is an essential management tool needed Agency-wide to link human capital planning to the Agency's resource and planning processes and mission. In addition, EPA will complete a comprehensive pay review. This review would focus on the impact of Federal pay systems on EPA-specific recruitment, retention, and skills mix issues. Other key efforts in FY 2003 include development of a streamlined internal policy manual, an interactive website, and establishment of an On-Line University. The On-Line University will enable the Agency to purchase approximately 2,000 course licenses to deliver on-line training to provide employees computer-based desktop training 24 hours a day, 7 days a week.

EPA's efforts in FY 2003 will build on work that began in June 1998, when the Agency initiated a Workforce Assessment Project (WAP) to identify the competencies needed to meet the agency's current and future missions. While the WAP's completion was an important first step in EPA's human capital planning efforts, it identified only general competencies for all EPA employees and did not determine the number of employees with the identified competencies needed either agency-wide, or in individual organizational or geographical units.

EPA is allocating significant resources to strengthen and maximize existing programs such as hiring at least 20 additional interns using the EPA intern program, development programs for all levels of employees, and a Senior Executive Service (SES) development program to ensure that at least 30 SES candidates are certified by Office of Personnel Management (OPM) for placement in vacant SES positions.

These efforts constitute key components in *Investing in Our People, EPA's Strategy for Human Capital 2001 through FY 2003* and represents EPA's commitment to addressing GAO's concerns over the potential loss of leadership continuity, institutional knowledge, and expertise in the SES ranks.

Competitive Sourcing

As part of our efforts to provide the public with cost effective and efficient services, EPA will carefully review our Federal Activities Inventory Reform Act process for FY 2003. The review will ensure EPA maintains an effective plan to competitively source activities which are identified as being commercial in nature, to determine whether they are more efficiently and effectively performed in-house or by the private sector.

In FY 2003, the Agency will increase the number of contracts that are performance-based, improve electronic commerce capabilities, and enhance the education of its contract workforce. The Procurement Executive Council (PEC) has established a Federal-wide goal in FY 2003 that 30 percent of contracts be performance-based. EPA intends to meet this goal by converting more program requirements to performance-based contracting, increasing training on how to use this type of contract, and providing outreach to the programmatic areas with percentage target.

In addition, the Agency will meet the President's initiative on electronic commerce by

- extending the use of electronic signatures;
- developing interfaces with all current Agency-wide systems involved in the buying and paying process;
- evaluating and working to eliminate paper-processing in the acquisition process;
- completing development and implementation of the Program Office Interface (POI), which will allow EPA program managers to electronically manage their contracts; and
- posting solicitations to the General Services Administration's (GSA) FEDBIZOPPS system as the single point of entry for vendors to government purchasing.

To meet the President's goal that 90 percent of all acquisition employees meet mandatory training requirements by 2005, the Agency will improve the qualifications and education of its contract workforce by providing appropriate training opportunities and establishing and enforcing mandatory training requirements.

Improved Financial Performance

In FY 2003, the Agency will develop innovative approaches to meet new Federal financial management challenges and continue to improve the delivery of core financial management customer services. EPA's financial management innovations are focused on providing Agency decision-makers with useful, reliable, and timely cost information associated with key results-based environmental information. By integrating cost and performance information, the Agency can further improve its capacity to manage for results and better support environmental priorities.

EPA will realize the benefits of integrated cost and performance information through its work to modernize and integrate its two major financial information systems: EPA's payroll and

central financial management systems. In addition, the replacement of these systems will support requirements to provide more frequent financial statement information to maintain Agency unqualified financial audit opinions, a key indicator of sound stewardship. EPA's investments to modernize mission-critical financial systems are designed to improve financial accountability, strengthen internal controls, increase data accessibility, reduce costs, simplify procedures, and strengthen information security. Specific actions in FY 2003 will make significant progress in modernizing key financial management systems, and are consistent with Agency information technology investment review processes. Actions include completion of the implementation plan for replacing EPA's legacy payroll system, and making recommendations for replacing EPA's integrated financial management system (IFMS). These recommendations will be based on the results of the preliminary analysis and evaluation of options.

The new core financial system will use a commercial off-the-shelf system, tested and certified by the federal Joint Financial Management Improvement Program, to improve financial accountability, ensure compliance with government accounting standards, and produce sound financial statements. Work to develop a new system includes financial operations analysis, and review of web-based, user friendly interfaces and decision support tools.

EPA is using commercial-off-the-shelf software to modernize and integrate its Agency-wide payroll system. The new system will automate several labor intensive payroll processes (timekeeping, labor distribution and redistribution); streamline payroll processing and accounting functions; meet evolving Federal requirements for cost accounting; re-engineer business processes; improve compliance with security and privacy requirements; and provide managers, supervisors and employees with ready access to data for analysis.

EPA is researching user-friendly reporting tools to provide desktop access to financial data in ways that can be tailored to individual programmatic needs. The tools will work with EPA's Financial Data Warehouse to allow Agency decision-makers to integrate cost and performance information from a range of Agency data systems into timely, accessible reports. The Agency will also continue development of systems to help EPA customers work efficiently and reduce administrative burden. For example, grantees will be paid through Treasury's Automated Standard for Application Payments (ASAP) system and EPA travelers will have a completely automated expense authorization and payment process from start to finish.

While the Agency is keeping pace with new technology, it is also developing policies and streamlining processes to improve services and strengthen resource stewardship. The Agency is working to gain higher efficiencies in financial services by shifting transaction activities to financial centers and revising financial policies to meet today's higher accounting standards and facilitate implementation of GPRA. EPA is also continuing its efforts to assure that Agency budgeting processes meet emerging priorities and satisfy Agency and Congressional requirements.

Budget and Performance Integration

The FY 2003 request includes resources for the Agency to develop new capacities to

improve the quality and use of performance measures. This work is part of EPA's overarching endeavor to develop results-based goals and evaluate the Agency's work in terms of its impact on human health and the environment. The Agency has integrated planning, budgeting, analysis, and accountability (PBAA) processes to support EPA's implementation of GPRA. In FY 2003, EPA plans to support program efforts to develop more outcome-based strategic and annual goals and measures, develop new sources of performance data, improve the quality and usability of existing data sources, and develop tools to set strategic priorities and track performance.

These objectives will be achieved through targeted efforts with EPA programs and state partners. This effort will support results-based management through a variety of potential approaches such as the following: addressing data gaps to develop more outcome oriented measures and goals, increasing state use of environmental data and performance information in environmental policy and management decisions, promoting integration of information on environmental conditions with other management systems used to make environmental policies and management decisions, supporting development of statistical models for linking program outputs and environmental improvements, and developing best practices and case studies based on current successful EPA or state environmental management efforts.

As part of these efforts, EPA will continue to consult with its partners and stakeholders (states, tribes, local government, other federal agencies, environmental associations, industry groups, the EPA Science Advisory Board) and the Congress and OMB. EPA will work to link annual plans to long-term goals and objectives of the Agency. Our continued work with state governments through the Environmental Council of the States (ECOS) and tribal governments, will ensure collaboration and cooperation with respect to the Agency's short- and long-term goals and objectives. In the development of the Agency's Annual Plan, EPA will involve the Agency's regulatory partners (principally states and Indian tribes) in identifying short- and long-term program priorities that can be considered in EPA's planning efforts. Our work in the areas of Federal Managers' Financial Integrity Act reporting, and compliance with the Inspector General Act, will include preparation of an annual report on material weaknesses, and semi-annual reports to Congress on audits, audit resolution activities, and support for audit coordinators throughout EPA. EPA will develop the Agency's consolidated Annual Report under GPRA in FY 2003. This report will be developed in context of comments made on the Agency's FY 2002 report by Agency customers, partners and stakeholders. The Annual Report provides the Congress and the public a comprehensive picture of its FY 2002 program and financial performance related to the achievement of annual performance goals and measures described in the Agency's revised final FY 2002 Annual Plan. This report also meets requirements for reporting on management integrity, audit management, and financial statements.

FY 2003 Change from FY 2002 Enacted

MULTI-APPROPRIATION

- (+$3,200,000 EPM and +$800,000 SF) With this increase in non-payroll resources, EPA will fulfill the FY 2003 phase of modernizing major Agency financial systems to provide decision-makers with integrated cost and performance information. FY 2003 efforts will focus on completing the Agency payroll implementation plan that will reduce costs and burdens, making recommendations for replacing EPA's integrated financial management system, and further developing desk-top access to key cost accounting and performance information.

EPM

- (+$500,000) Reflects an increase in funding for the Agency's Human Capital Strategy to complete a comprehensive workforce planning model. Other initiatives include a pay review, an interactive web-site, and establishment of an On-Line University.

- (+$900,000) This increase in non-payroll resources is to expand Agency and State partner targeted efforts to manage for results. The initiative will focus on tools, technical support, data and other resources for the improvement of the quality and use of performance measures.

- (+$2,048,700) This reflects a national increase in the transit subsidy to accommodate the maximum monthly allocation increase to $100, as well as an anticipated increase in transit subsidy subscribers (recipients) due to Headquarters consolidation.

- (-$3,933,500) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Superfund

- (-$1,836,800) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal,

objective. Changes in these activities reflect shifts in resources between goals and objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Annual Performance Goals and Measures

Strengthen EPAs Management

In 2003 Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request		
Number of Agency offices using the workforce planning model which identifies skills and competencies needed by the Agency for strategic recruitment, retention and developmental training				5	*Offices*
Percentage of total eligible service contracting dollars obligated as performance based in FY2003.				30	Percent
Agency audited Financial Statements are timely, and receive an unqualified opinion				one	Finan statem

Baseline. Based on FY 2002 performance, baselines are. Zero for number of Agency offices using the workforce planning model, 20% for performance-based contracts, and an unqualified opinion for financial statements

Verification and Validation of Performance Measures

Performance Measure: Number of Agency offices using the workforce planning model which identifies skills and competencies needed by the Agency for strategic recruitment, retention and developmental training.

Performance Database: No database. Agency staff track manually.

Data Source: Agency staff.

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Performance Measure: Percentage of total eligible service contracting dollars obligated as performance based.

Performance Database: The Integrated Contracts Management System (ICMS), which has an

identifier to show which contracts are performance based and the dollars associated with it.

Data Source: Agency personnel inputs data into ICMS.

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: ICMS was updated in order to track this performance measure

Coordination with Other Agencies

To achieve its mission, OCFO has undertaken specific coordination efforts with federal and state agencies and departments through three separate vehicles: 1) the National Academy of Public Administration's Consortium on Improving Government Performance; 2) active contributions to standing interagency management committees, including the Chief Financial Officers Council, the Federal Financial Managers' Council and the President's Council on Integrity and Efficiency. These groups are focused on improving resources management and accountability throughout the Federal government. OCFO also coordinates appropriately with Congress and other federal agencies, such as Department of Treasury, Office of Management of Budget, and the General Accounting Office.

EPA will develop and issue guidance for executive agencies to use when purchasing goods and services in response to Executive Order 13101 to show a preference for "environmentally preferable" products and services.

Statutory Authorities

Federal Manager's Financial Integrity Act (1982)
The Chief Financial Officers Act (1990)
The Prompt Payment Act (1982)
The Government Performance and Results Act (1993)
Government Management Reform Act (1994)
Inspector General Act of 1978 and Amendments of 1988
Title 5 United States Code.
Annual Appropriations Act
EPA's Environmental Statutes, and the Federal Grant and Cooperative Agreement Act
Federal Acquisition Regulations (FAR), Contract law, and EPA's Assistance Regulations (40CFR Parts 30, 31, 35, 40, 45, 46, 47)
Clinger-Cohen Act
Paperwork Reduction Act,
Freedom of Information Act
Computer Security Act

Privacy Act
Electronic Freedom of Information Act
Comprehensive Environmental Response, Compensation and Liability Act
Brownfields Revitalization and Environmental Restoration Act

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Effective Management

Objective: Provide Quality Work Environment.

Effectively conduct planning and oversight for building operations and provide employees with a quality work environment that considers safety, new construction, and repairs and that promotes pollution prevention within EPA and with our state, tribal, local, and private partnerships.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Provide Quality Work Environment.	**$177,971.0**	**$169,367.3**	**$156,141.5**	**($13,225.8)**
ALLOCATION ACCT	$24,988.5	$0.0	$0.0	$0.0
Building and Facilities	$28,275.5	$25,318.0	$42,918.0	$17,600.0
Environmental Program & Management	$80,410.7	$96,535.6	$80,105.9	($16,429.7)
Hazardous Substance Superfund	$26,434.6	$22,595.8	$21,608.3	($987.5)
Leaking Underground Storage Tanks	$237.5	$1,013.9	$1,018.4	$4.5
Oil Spill Response	$76.2	$454.1	$451.9	($2.2)
Rereg. & Exped. Proc. Rev Fund	$1,890.0	$0.0	$0.0	$0.0
Science & Technology	$15,658.0	$23,449.9	$10,039.0	($13,410.9)
Total Workyears	17.7	24.3	15.4	-8.9

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$612 4	$0.0	$0.0	$0.0
Facilities Infrastructure and Operations	$115.272.8	$106.936.9	$100.221.3	($6,715.6)
Homeland Security	$0.0	$30,040.0	$19.000.0	($11.040.0)
Legal Services	$124.9	$140.2	$150 6	$10.4
Management Services and Stewardship	$8.092.8	$5.963.9	$8.974.0	$3,010.1
Regional Management	$20.889.1	$18.807.3	$20.416.7	$1.609.4
Regional Program Infrastructure	$6,177.1	$6.132.2	$6.032.1	($100.1)
Superfund Remedial Actions	$1.368.8	$1.346.8	$1,346.8	$0.0

FY 2003 Request

This objective supports the Agency's goal for Effective Management through the construction of new facilities, and the design and establishment of state-of-the-art laboratories. These facilities provide the tools essential to research innovative solutions to current and future environmental problems and enhancing our understanding of environmental risks. In addition, EPA is well engaged in reducing energy use needed to operate these facilities. In FY 2003, the Agency will continue to improve operating efficiency and encourage the use of new and advanced technologies and energy savings performance contracts.

In FY 2003, to enhance EPA's program offices and to achieve their critical mission-related activities and to ensure quality and safe working environments for all Agency employees, the Agency intends to redirect resources for infrastructure, increased security and repair and improvement projects. EPA conducts its business in 146 facilities nationwide which have capital asset value that exceeds $1 billion. In the past several years, the Agency has gradually moved from rented/leased facilities to government-owned facilities. As a result, the Agency has had to absorb greater operational and infrastructure maintenance costs which were formerly covered under rent agreements. EPA is currently spending 0.3 percent of the replacement value of its real estate assets on building repairs and improvements. The industry recommended level of 2 - 5 percent of the replacement value.

The FY 2003 budget for the Agency's building operations and new construction will support existing infrastructure requirements that ensure healthy, safe, and secure work environments that reflect the pollution prevention goals of EPA and help fulfill the scientific and functional program requirements. Two examples of scientific/technological projects and improvements to meet regulatory requirements and emerging national security needs are described below.

- The Agency facility in Athens, Georgia will obtain an ecological exposure greenhouse addition as well as a soil/atmospheric interaction laboratory which will enable the Office of Research and Development (ORD) to conduct various ecological exposure process research studies and to demonstrate cost-effective clean up procedures of various military and the Department of Energy (DOE) facilities and Superfund sites. This project will help the Federal government save money by avoiding excessive reliance on expensive field studies and by establishing greater efficiencies in remedial activities. ORD will use the interaction laboratory to conduct specialized research studies for use in multimedia model development and testing and chemical leaching assessment. This lab will increase the type and number of experiments that can be conducted at a lower expense than using alternate lease arrangements.

- At the new Consolidated Laboratory at Research Triangle Park (RTP), supplemental power for the Heavy-Duty Dynamometer Bay will enable its automobile engine emissions testing facility to simulate a full range of actual operating conditions. With this additional power, research and development teams will be able to satisfy new laws that require testing of four wheel drive vehicles. Also at RTP, we plan to provide two additional clean-animal rooms.

With growing environmental concerns about genetic engineering technology, transgenic animals have rapidly become important subjects for identifying sub-populations that are genetically susceptible to environmental toxicity. This project will greatly enhance the lab's ability to use this powerful new research technology as a way to improve the Agency's risk-assessment process.

- In the wake of attacks upon the Pentagon and World Trade Center, the President identified the security of Federal facilities and personnel as a national priority. A total of $19 million is requested to complete comprehensive security assessments of all EPA offices, laboratories and other support facilities begun in FY 2002, and to continue the enhancement of security measures. Examples of improvements include additional guards, blast resistant glass, exterior barriers, locks, motorized gates, cameras, and other monitoring equipment. Enhanced security measures will remain an important component of the Agency's facility management strategy in the years ahead.

Resources in this objective will also be used to comply with Executive Orders (EO)13149, *Greening the Government through Federal Fleet and Transportation Efficiency* and EO 13123, *Greening the Government through Efficient Energy Management.*

EO13149 requires that by FY 2005, petroleum use be 20 percent lower than that in 1999. EPA will direct resources towards acquiring alternative fuel vehicles and more fuel-efficient passenger cars and light trucks. EO 13123 requires a 20 percent reduction of energy consumption (per square foot or per unit production) in laboratory facilities by FY 2005. The Agency will attain this goal through several initiatives including comprehensive facility energy audits, sustainable building design in Agency construction and alteration projects, energy savings performance contracts to achieve energy efficiencies, the use of off-grid energy equipment, energy load reduction strategies, and the use of Energy Star products and buildings.

In addition, in FY 2003, funds will be used to promote EPA's "Laboratories for the 21st Century" program which encourages energy conservation and pollution prevention at labs in partnership with industry and state and local governments. The Agency will continue to sponsor an annual conference with the Department of Energy (DOE) which provides an international forum for private and public sector laboratory designers, engineers, owners, and operators to discuss and learn about new ways of achieving low-energy use and high-performance laboratories. Over 400 attendees are expected for the FY 2003 conference with DOE. Innovative energy efficiency results are expected to be showcased at several EPA labs, such as Kansas City, Kansas and Ada, Oklahoma.

FY 2003 Change from FY 2002 Enacted

MULTI-APPROPRIATION

- (-$2,923,500 EPM, -$250,300 SF, -$8,867,000 S&T, and -$3,900,000 B&F) Reflects the ramping down of the New Headquarters Project as we complete consolidation, and of the new Research Triangle Park, NC complex as it is completed. Resources are being redirected to fund core Agency requirements (utilities, security, repairs and improvements, and energy efficiency initiatives).

- (-$18,000,000 EPM, -$4,540,000 S&T, and +$11,5000,000 B&F) The FY 2003 request, combined with resources provided in the FY 2002 supplemental, provide necessary funding to complete the nation-wide security assessment of all EPA facilities, and for security improvements, where necessary, as begun in FY 2002. Examples of security enhancements include increased guard services, and interior and exterior countermeasures (e.g. identification badging systems, blast-resistant windows, barriers, gates and locks), at EPA facilities.

- (+2,629,900) Reflects a redirection of resources for Energy Efficiency projects for the Agency's facilities, in fulfillment of Executive Order 13123, *Greening the Government through Efficient Energy Management*. The EPA is a government leader for energy-saving innovations and initiatives for offices, laboratories and other facilities.

B&F

- (+$10,000,000) Reflects a redirection of resources for infrastructure and Repair and Improvement projects.

Annual Performance Goals and Measures

Energy Consumption Reduction

In 2003 By 2003, EPA will achieve a 15% energy consumption reduction at its 21 laboratories.

In 2002 EPA will implement 5 energy saving projects at EPA owned facilities.

In 2001 In FY 2001 the Agency completed projects which will significantly reduce energy consumption at five EPA-owned laboratories.

Performance Measures	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Numoer of energy saving projects at EPA owned facilities	5	5		Projects
Cumulative percentage reduction in energy consumption (from 1990).			15	Percent

Baseline In FY 2000, energy consumption of British Thermal Units (BTUs) per square foot is 320,000 BTUs per square foot.

Verification and Validation of Performance Measures

None.

Coordination with Other Agencies

EPA will develop and issue guidance for executive agencies to use when purchasing goods and services in response to Executive Order 13101 to show a preference for "environmentally preferable" products and services.

Statutory Authority

Federal Manager's Financial Integrity Act (1982)
The Chief Financial Officers Act (1990)
The Prompt Payment Act (1982)
The Government Performance and Results Act (1993)
Government Management Reform Act (1994)
Inspector General Act of 1978 and Amendments of 1988
Title 5 United States Code
Annual Appropriations Act
EPA's Environmental Statutes, and the Federal Grant and Cooperative Agreement Act
Federal Acquisition Regulations (FAR), contract law, and EPA's Assistance Regulations (40CFR Parts 30, 31, 35, 40, 45, 46, 47)
Clinger-Cohen Act
Paperwork Reduction Act
Freedom of Information Act
Computer Security Act
Privacy Act
Electronic Freedom of Information Act
Comprehensive Environmental Response, Compensation and Liability Act

Effective Management

Objective: Provide Audit, Evaluation, and Investigative Products and Services

Provide audit, evaluation, and investigative products and advisory services resulting in improved environmental quality and human health.

Resource Summary
(Dollars in Thousands)

	FY 2001 Actuals	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena
Provide Audit, Evaluation, and Investigative Products and Services	**$48,022.9**	**$51,961.4**	**$53,592.7**	**$1,631.3**
Environmental Program & Management	$7,039.8	$5,989.8	$4,290.0	($1,699.8)
Hazardous Substance Superfund	$197.3	$11,952.6	$13,977.7	$2,025.1
Inspector General	$40,785.8	$34,019.0	$35,325.0	$1,306.0
Total Workyears	336.1	374.1	372.3	-1.8

Key Program
(Dollars in Thousands)

	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request	FY 2003 Req. v. FY 2002 Ena.
Administrative Services	$76.0	$0.0	$0.0	$0.0
Assistance Agreement Audits	$3,487.6	$2,000.0	$0.0	($2,000.0)
Assistance Agreement Investigations	$793.6	$2,900.0	$0.0	($2,900.0)
Contract Audits	$5,025.4	$5,200.0	$0.0	($5,200.0)
Contract and Procurement Investigations	$510.1	$3,100.0	$0.0	($3,100.0)
Employee Integrity Investigations	$325.8	$1,000.0	$0.0	($1,000.0)
Facilities Infrastructure and Operations	$7,033.4	$5,673.2	$5,243.6	($429.6)
Financial Statement Audits	$4,000.0	$4,000.0	$0.0	($4,000.0)
Investigations	$0.0	$0.0	$9,469.6	$9,469.6
Management Services and Stewardship	$418.4	$402.2	$282.1	($120.1)
Planning, Analysis, and Results - IG	$9,463.3	$6,286.0	$0.0	($6,286.0)
Program Audits	$6,179.0	$4,900.0	$0.0	($4,900.0)
Program Evaluation - IG	$15,308.9	$15,000.0	$0.0	($15,000.0)
Program Evaluations/Audit	$0.0	$0.0	$38,597.4	$38,597.4
Program Integrity Investigations	$400.0	$1,500.0	$0.0	($1,500.0)

FY 2003 Request

The Office of Inspector General (OIG) provides audit, evaluation, investigative, and advisory services that fulfill the requirements of the IG Act and contribute to improved Agency management, environmental quality and human health. The work of the OIG supports the attainment of Agency Strategic Goals and assists the Agency in resolving its top management challenges. Audits and program evaluations, selected based on relative risk, materiality, and results of past reviews, identify best practices, areas for improvement, and cooperative solutions to problems. Investigations focus on alleged fraud, waste, abuse, and other illegal activities by EPA employees, contractors, and grantees. Investigations are also vital in identifying high-risk vulnerabilities, systemic weaknesses, improvements in programs and operations, savings, and economic benefits.

During FY 2003, the OIG will continue its new directions of:

- *performing program evaluations* to provide Congress and the Agency with best practices, analyses, and recommendations to address the most serious management challenges, accomplish environmental objectives, and achieve Government Performance and Results Act (GPRA) goals;

- *partnering with others*, including other Federal and State auditors, evaluators, law enforcement officials and associations who also have environmental missions, to leverage our resources to attain maximum environmental benefits with available resources; and

- *implementing human resource and knowledge management strategies* that will ensure that the OIG has a diverse, highly motivated and accountable staff with the skill sets and tools needed to perform increasingly complex work.

More specifically, the OIG will concentrate during FY 2003 on the following areas:

Air - The OIG's approach to assessing EPA's achievement of its clean air goal will center on evaluating major opportunities for cost-effective pollution reduction. The OIG will focus on the quality of emission data, the effectiveness of emission allowance trading, and the adequacy of air monitoring networks.

Water - The OIG's work will center on the Agency's watershed approach with emphasis on national effluent guideline limitations and standards, water quality monitoring information, water infrastructure needs and costs, and assessing the effectiveness of point and non-point source programs. Further, the OIG will assess whether the Agency has comprehensive contingency plans ensuring continuity and protection of essential water functions across a wide range of potential emergencies.

Waste Management - The OIG will concentrate on determining the extent of contaminated waste sites remaining to be cleaned up, the environmental risks these sites pose, and whether cleanup decisions are scientifically sound and cost-effective. Since many of the sites remaining to be cleaned up are on Federal lands, the OIG will work closely with the GAO and other Federal IGs to accomplish our work.

Scientific Research - The OIG will analyze EPA's scientific and peer review programs to evaluate their integrity, determine the effectiveness of scientific data in influencing program management decisions, and evaluate Agency efforts to pursue environmental protection innovations. The OIG will also continue to investigate criminal activity in laboratory work.

Computer Security - In accordance with the Government Information Security Reform Act, the OIG will continue to evaluate major aspects of EPA's computer security program and practices. The OIG plans to: (1) monitor computer security weaknesses previously identified by our office and the GAO; (2) identify new and emerging vulnerabilities to network security; and (3) advise the Agency of any additional computer security enhancements needed to reduce the risk of damage and disruption to EPA's critical systems. The OIG will also continue performing criminal investigations of intrusive activities affecting EPA computer security and participate with other law enforcement agencies in the growing effort to protect computer security.

Systems - The OIG will evaluate EPA's organizational systems and capacity to achieve results-based management. Specifically, the OIG will evaluate the Agency's efforts to implement a systematic, customer-oriented, automated managerial cost accounting system that will provide program managers with relevant and reliable information relating costs to activities, outputs, and outcomes, and also assess the ability of Regions, States, and Tribes to effectively access the system.

The OIG will continue to build capacity for performing program evaluations. The primary emphasis of those evaluations will be to determine whether EPA has designed the programs, projects, and tasks within the goals, objectives, and subobjectives reported to Congress under GPRA to achieve the desired results and impacts in the most efficient and cost-effective manner. Staffed with a mix of program analysts, scientists, auditors, economists, and others, program evaluations will assist the Agency in identifying what works and at what cost. Evaluation efforts in FY will concentrate on:

- assessing the Agency's methodology for determining the relative adverse effects of loadings and air deposition on surface waters, and evaluating the effectiveness of EPA's national effluent guideline limitations and standards to determine whether they are appropriate for reducing industrial discharge of pollutants;

- evaluating the cost and effectiveness of emission allowance trading in terms of environmental justice; examining the relationship of pollutants to environmental measures; assessing the adequacy of air monitoring networks, the validity and reliability of emission data, and the adequacy of EPA's human health and ecological impact measures;

- assessing the use of sound science and innovative technologies in Superfund cleanups, and determining the appropriateness of Superfund remedy selections;

- evaluating the impact of EPA activities on community relations. Planned program audits will focus increased attention on contract administration, including the effective use of contracting vehicles introduced in recent years.

The OIG Computer Crimes Unit (CCU) will conduct investigations of computer intrusions, support the OIG and Agency personnel as a Penetration Testing Laboratory, and provide a Forensics Laboratory to assist with OIG investigations. The CCU will continue to be an active participant in the law enforcement computer crimes community, working collaboratively on joint projects. The Intrusion Unit of the CCU will develop guidelines for computer incident response and serve as a clearinghouse for all computer incident reports. The Intrusion Unit will also work collaboratively with the Agency to develop an Agency-wide training program for information security professionals regarding response to computer intrusion incidents. The Forensics Unit of the CCU will conduct forensic examinations in support of OIG investigations. As the Agency continues to move toward a paperless environment, the need for these examinations is expected to grow significantly.

The Ombudsman conducts the OIG Hotline function and is responsible for the review of public complaints about Agency programs and activities. The Ombudsman receives complaints about fraud, waste, and mismanagement in Agency programs and activities; screens and recommends priority complaints for further review by OIG or Agency offices; oversees case reviews, findings, and recommendations, and reports on the results of these cases.

The OIG product line includes:

Audits

- *Contract Audits* - determine the allowability, allocability, and reasonableness of costs claimed by contractors.

- *Assistance Agreement Audits* - financial audits of EPA's State Revolving Fund programs, Performance Partnership Grants, interagency agreements, and cooperative agreements.

- *Financial Statement Audits* - audits of the Agency's financial systems and statements to ensure that adequate controls are in place and the Agency's accounting information is accurate, reliable and useful, and complies with applicable laws and regulations.

- *Systems Audits* - review the economy, efficiency and effectiveness of operations by examining the Agency's support systems for achieving environmental goals, including its information systems and systems for setting priorities, developing plans to accomplish them, and measuring performance.

Program Evaluations/Audits

Program Evaluations/Audits use sophisticated analytical tools, methodologies and specialized skills to determine the extent to which the desired results and benefits envisioned by the Administration and Congress are being achieved:

- *Process evaluations* assess the extent to which a program is operating as it was intended;
- *Outcome evaluations* assess the extent to which a program achieves its outcome-oriented objectives;
- *Impact evaluations* assess net effect of a program by comparing outcomes with the absence of the program; and
- *Cost Benefit evaluations* compare the program's outputs or outcomes with the costs to produce them.

Our *program audit* work includes evaluating whether EPA's contracts and assistance agreements are being awarded and administered in a manner that supports achievement of the Agency's environmental mission.

Investigations

- *Program Integrity Investigations* focus on activities that could undermine the integrity of Agency programs, and erode public confidence in the Agency.
- *Assistance Agreement Investigations* focus on criminal activities related to Agency grants, State Revolving Funds, Interagency Agreements, and Cooperative Agreements.
- *Contract and Procurement Investigations* focus on acquisition management, contracts, and procurement practices.
- *Employee Integrity Investigations* involve allegations against EPA employees that could threaten the credibility of the Agency.

Investigations of computer crime identify and counter illegal intrusions of EPA's computer systems. Through a specialized computer intrusion unit, the OIG will coordinate with the FBI's National Infrastructure Protection Center, and with the U.S. General Accounting Office's (GAO) Federal Computer Intrusion Response Center. These investigations may be part of any of the above investigative categories.

The OIG's initiative to uncover criminal activity in laboratories involves investigating indicators of laboratory fraud within the environmental community to include commercial and EPA laboratories. The Agency relies upon laboratory test results to assess environmental threats and determine what actions are necessary to control hazardous wastes, toxins, and other contaminated substances that pollute our air, water, and land. These investigations generally are part of contract and procurement investigations or program integrity investigations.

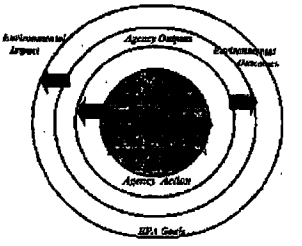
Advisory and Assistance Services

Advisory and Assistance Services include a wide range of products and services designed to

give managers information they need more expediently than audits or evaluations, and to assist EPA management in assessing and/or implementing control systems and processes.

Linking Our Work to Outcomes and Impacts

All of our work is planned based on the anticipated value toward influencing resolution of the Agency's major management challenges, reducing risk, improving practices and program operations, and saving taxpayer dollars while leading to the attainment of EPA's Strategic Goals. Our strategic plan aligns OIG products and services with current Agency goals and priorities based upon emerging issues, legislative initiatives, needs of various customers, clients and stakeholders and multiple dynamic external factors.



Creating a Nexus or Link Between OIG Products/ Services and Environmental Impacts/Goals

Audit, Evaluation, Advisory, Investigative Products and Services	*Agency Intermediate Outcomes (Catalysts)*	*Agency Goals/Outcomes and Impacts*
Questioned Costs/Savings Recommendations/Opinions Advice/Analysis/Projects Indictment/Convictions Civil/Administrative Actions Fines/Restitutions Reports/Briefings Evaluation Conclusions	Legislative Change Regulatory Change Policy Change Practice Change Enforcement Actions Industry, Grantee or State Monitoring Costs Recovered, Offset, Saved or Avoided	Improved Efficiencies Improved Effectiveness Improved Controls Increased Compliance Improved Reporting Risk Reduction Improved Environmental and Human Health Results/Indicators

Examples below are prospective EPA outputs and outcomes potentially resulting from Agency acceptance of our products and services. Environmental impacts and management improvements are logical extensions of actions taken on audit, evaluation, investigation, advisory products and services.

Water and Air Quality	**Safe Food and Waste Management**	**Assistant Agreements and Financial Management; Enforcement & Compliance; Sound Science and Data Quality**
Increased number of watersheds restored Percentage of population with clean water Number of states with approved standards consistent with the Clean Water Act Quality of stewardship strategies Percentage of people with healthy indoor air Number of states with good air quality	Quality of enforcement actions for timely site resolution Number of construction remedies to control risks to human health Number of sites cleaned up Number and quality of pesticides tolerance assessments and reregistrations Percentage of people with safe food	Percentage of people with better treatment of and access to clean water Financial information, reliable and useful for decision making Better enforcement actions for compliance and reduction of actual risk Integrity of data used for management, policy and enforcement actions

FY 2003 Change from FY 2002

EPM

- (+$98,000) This increase reflects the transfer of the Ombudsman function non-payroll resources.

- (-$1,590,400) Resources, dollars and FTE, associated with rent are allocated in proportion to Agency-wide FTE located in each goal, objective. Resources, dollars and FTE, associated with utilities, security and human resource operations are allocated in proportion to Headquarters FTE located in each goal, objective. Changes reflect shifts in FTE between goals and objectives. Resources, dollars and FTE, associated with contracts and grants are allocated in proportion to Headquarters' contracts and grants resources located in each goal, objective. Changes in these activities reflect shifts in resources between goals and

objectives. *(Total changes - rent: -$3,569,400, utilities: +$3,468,000, Security: -$9,103,900. Nominal increases/decreases occurred in human resource operations, grants and contracts related activities.)*

Superfund

- (+$294,000) This increase reflects the transfer of the Ombudsman function non-payroll resources.

Annual Performance Goals and Measures

Fraud Detection and Deterrence

In 2003 Improve Agency management and program operations by identifying savings, recoveries , and fines equaling 150 percent of the investment in the OIG, and by preventing fraud and reducing the risk of loss through 50 criminal, civil, or administrative actions.

In 2002 Improve Agency management and program operations by identifying savings, recoveries , and fines equaling the annual investment in the OIG, and by preventing fraud and reducing the risk of loss through 50 criminal, civil, or administrative actions

In 2001 We met our goal to increase our effectiveness in detecting & deterring fraud & other improprieties that undermine the integrity of Agency programs/resources Investigations resulted in 120 judicial, administrative & other actions taken to enforce laws & reduce/avoid risk & $5.3 millions in savings

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of judicial, administrative, or other actions taken		50	50	Actions
Return on the annual dollar investment in the OIG		100	150	Percent

Baseline. In FY 2001, the OIG will identify savings, recoveries, and fines at a baseline of $44.3 million and reduce the risk of loss through criminal, civil, or administrative actions at a baseline of 54 actions.

Audit and Advisory Services

In 2003 Improve environmental quality and human health by recommending 75 improvements across Agency environmental goals, identifying and recommending solutions to reduce 20 of the highest environmental risks, and identifying 20 best environmental practices

In 2002 . Improve environmental quality and human health by recommendmg 50 improvements across Agency environmental goals, identifying and recommending solutions to reduce 15 of the highest environmental risks, and identifying 15 best environmental practices.

In 2001 The OIG exceeded its annual performance goals of providing timely, independent auditing and consulting services responsive to the needs of our customers that provide value to the agency and recommendations to improve program and operational performance and integrity

Performance Measures:	FY 2001 Actual	FY 2002 Enacted	FY 2003 Request	
Number of environmental improvements made, reductions in environmental risks		65	95	Improvemen
Number of best environmental practices identified		15	20	Practices

Baseline In FY 2001, the OIG will recommend improvements across the Agency environmental goals and recommend solutions to reduce the highest environmental risks at a baseline of 68 recommendations

Verification and Validation of Performance Measures

Performance Measure: Number of recommendations for environmental improvements made, reductions in environmental risks and best environmental practices.

Performance Database: The OIG Performance Results and Measurement System is used to capture and aggregate information on the actual and prospective results of OIG products and services. The database identifies an array of measures in logic model format linking immediate outputs with longer term intermediate outcomes and results supporting the Office of Inspector General's (OIG) strategic goals. Because intermediate and long-term results do not come to fruition for several years, only verifiable results are reported in the year completed, while others remain prospective until completed and verified. Database measures include numbers of1) recommendations for environmental improvement; 2) legislative and regulatory changes;
3) policy, directive, or process changes; 4) environmental risks identified, reduced or eliminated; 5) best practices identified and transferred; and 6) examples of environmental improvement.

Data Source: Designated OIG staff are responsible for entering data into the system. Data are from OIG independent follow-up, research, and certifications of actions taken by EPA officials. OIG also collects independent data from EPA's partners and through its own performance evaluations, audits, and research to determine the extent of environmental improvements, risks reduced or avoided, and best practices transferred.

QA/QC Procedures: All performance data submitted to the database require at least one verifiable source ensuring data accuracy and reliability. Data quality assurance and control are automatically performed as an extension of OIG products and services, subject to rigorous compliance with the Government Auditing Standards of the Comptroller General, and regularly reviewed by OIG management, an independent OIG Management Assessment Review Team, and external independent peer reviewers. The statutory mission of the OIG, is to conduct independent audits, evaluations, and investigations to promote, among other things, integrity in Agency operations and reporting systems.

Data Quality Reviews: There have not been any previous audit findings or reports by external groups on data or database weaknesses in the OIG Performance Results and Accountability System.

Data Limitations: All OIG staff are responsible for data accuracy in their products and services. However, there is the possibility of incomplete, miscoded, or missing data in the system due to human error. Data supporting achievement of results are often from indirect or external sources, with their own methods or standards for data verification/validation.

New/Improved Data or Systems: The OIG developed the Performance Results and Accountability System as a prototype in FY 2001 and anticipates enhancing it in FY 2003 with more sophisticated software designed to improve data collection, retention, and analysis. This system is a best practice in government for linking an array of measures from outputs to eventual results and impacts. With enhanced linkages to customer satisfaction results and resource investments, it will provide a full,

balanced scorecard with return on investment information for accountability and decision-making.

Coordination with Other Agencies

The EPA Inspector General is a member of the President's Council on Integrity and Efficiency (PCIE), an organization comprised of Federal Inspectors General (IG). The PCIE coordinates and improves the way IGs conduct audits and investigations, and completes projects of government-wide interest. The EPA OIG is also a member of the Environmental Consortium. The Consortium, which seeks effective solutions to cross-cutting environmental issues, currently includes representatives from 19 executive agencies and GAO. The OIG Computer Crimes Unit coordinates activities with other law enforcement organizations with computer crimes units such as the Federal Bureau of Investigation, the Secret Service, and the Department of Justice. In addition, the OIG participates with various inter-governmental audit forums, professional associations, and other cross-governmental forums to exchange information, share best practices and directly collaborate efforts.

Statutory Authorities

Inspector General Act of 1978, as amended
Chief Financial Officers Act
Government Management Reform Act
Federal Financial Management Improvement Act
Comprehensive Environmental Response, Compensation and Liability Act
Food Quality Protection Act

5-YEAR PERFORMANCE DATA
Annual Performance Goals and Measures

GOAL 01: 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.

OBJECTIVE 01: ATTAIN NAAQS

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

Reduce Ozone and Ozone Precursors

In 2003	Maintain healthy air quality for 44.1 million people living in monitored areas attaining the ozone standard; certify that 2 areas of the remaining 45 nonattainment areas have attained the 1-hour NAAQS for ozone thus increasing the number of people living in areas with healthy air by 1.0 million.
In 2001	EPA maintained healthy air quality for 38.2 million people living in 43 areas attaining the ozone standard, increased by 3.5 million the number of people living in areas with healthy air quality that have newly attained the standard by certifying that 3 new areas have attained the 1-hour standard.
In 2000	Maintained healthy air quality for 33 4 million people living in 43 areas attaining the ozone standard.
In 1999	Healthy air quality maintained for 33.4 million people living in 43 areas attaining the ozone standard
In 1999	The Regions revoked the 1-hour standard in 10 areas. However, based upon the Circuit Court decision regarding the revised ozone standard, the Agency has proposed to reinstate the 1-hour standard.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Publish Notice Revoking 1-Hour Standard	10					Areas
Consumer Product Rules	0					Rules
National Guidance on Ozone SIP	1 Draft					Issued
States submit designations of areas for attainment of the ozone standard	50					States
Total Number of People who Live in Areas Designated to Attainment of the Clean Air Standards for Ozone	33,363,000	35,063,000	41,679,000		45,167,000	People
Areas Designated to Attainment for the Ozone Standard	0	1	3		2	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the Ozone Standard	0	1,700,000	3,475,000		1,021,000	People
VOCs Reduced from Mobile Sources	1,409,000	1,562,000	1,659,000		1,852,000	Tons
NOx Reduced from Mobile Sources	898,000	1,059,000	1,189,000		1,449,000	Tons

Baseline: As a result of the Clean Air Act Amendments of 1990, 101 areas with a population of 140,015,000 were designated nonattainment for the 1-hour standard. Through 2001, 46 areas with a population of 41.7 million have been redesignated to attainment and 55 areas remain in nonattainment. (Population estimates based on 2000 census.) The 1995 baseline for VOCs reduced from mobile sources is 8,134,000 tons and 11,998,000 tons for NOx, both ozone precursors.

Reduce Particulate Matter

In 2003 Maintain healthy air quality for 7.2 million people living in monitored areas attaining the PM standards; increase by 81 thousand the number of people living in areas with healthy air quality that have newly attained the standard.

In 2001 EPA maintained healthy air quality for 1.189 million people living in 9 areas attaining the PM standards and increased by 2.249 million the number of people living in areas with healthy air quality that have newly attained the standard.

In 2000 Maintained healthy air quality for 1.2 million people living in 7 areas attaining the PM standards, and increased by 75.8 thousand the number of people living in areas with healthy air quality that have attained the standard.

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

In 1999 Healthy air quality maintained for 1.2 million people living in 7 areas attaining the PM standards.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
National Guidance on PM-2.5 SIP and Attainment Demonstration Requirements	1 Draft					Issued
Provide Draft Documents to CASAC for PM NAAQS Review	30-Sep-2000					
Cumulative total number of monitoring sites deployed	1110					Sites
Total Number of People who Live in Areas Designated in Attainment with Clean Air Standards for PM	1,200,000	1,275,800	3,438,000		7,262,000	People
Areas Designated to Attainment for the PM-10 Standard	0	2	8		8	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the PM Standard	0	75,800	2,249,000		81,000	People
PM-10 Reduced from Mobile Sources	18,000	20,000	22,000		25,000	Tons
PM-2.5 Reduced from Mobile Sources	13,500	15,000	16,500		18,000	Tons

Baseline: As a result of the Clean Air Act Amendments of 1990, 84 areas with a population of 31,114,000 were designated non-attainment for the PM-10 standard. Since that time, EPA has split Pocatella into 2 areas thereby revising the baseline to 85 with a population of 31,114,000. Through 2001, 17 areas with a population of 3 4 million have been redesignated to attainment (Population estimates based on 2000 Census.) The 1995 baseline for PM-10 reduced from mobile sources is 880,000 tons and 659,000 for PM-2.5.

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Reduce CO, SO2, NO2, Lead

In 2003 Maintain healthy air quality for 52.7 million people living in monitored areas attaining the CO, SO2, NO2, and Lead standards; increase by 4.1 million the number of people living in areas with healthy air quality that have newly attained the standard.

In 2001 EPA maintained healthy air quality for 36.3 million people living in 56 areas attaining the CO, SO2, NO2, and Lead standards and increased by 418,000 the number of people living in areas with healthy air quality that have newly attained the standard.

In 2000 Maintained healthy air quality for 27.7 million people living in 46 areas attaining the CO, SO2, NO2, and Lead standards, and increased by 3.41 million the number of people living in areas with healthy air quality that have attained the standard.

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

In 1999 Healthy air quality for 22 8 million people living in 33 areas attaining the CO, SO2, NO2, and Lead standards was maintained, and 4.9 million more people are living in areas with healthy air quality that have attained the standard

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Total Number of People Living in Areas Designated in Attainment with Clean Air Standards for CO, SO2, NO2, and Pb	27,718,000	31,100,000	36,721,000		56,732,000	People
Areas Designated to Attainment for the CO, SO2, NO2, and Pb Standards	13	10	9		15	Areas
Additional People Living in Newly Designated Areas with Demonstrated Attainment of the CO, SO2, NO2, and Pb Standards	4,918,531	3,410,000	418,000		4,007,300	People
CO Reduced from Mobile Sources	9,841,000	10,341,000	10,672,000		11,333,000	Tons
Total Number of People Living in Areas with Demonstrated Attainment of the NO2 Standard	13,000,000	13,000,000	14,944,000		14,944,000	People

Baseline: For SO2, NO2, Lead, and CO, 107 areas with a population of 67,573,000 were classified as non-attainment or were unclassified in 1990. Through 2001, 65 of those areas with a population of 36.7 million have been redesignated to attainment. (Population estimates based on 2000 census.) The 1995 baseline for mobile source emissions for CO was 70,947,000 tons

Air Quality Index

In 2003 The three year average of the total number of days nationwide that any city reports air quality index (AQI) values greater than 100 in the nation's 94 largest metropolitan areas will drop from 1,548 in 1997-1999 to 1,290 in 2001-2003, which is 3.7% of total days.

In 2001 Three year trend data not available until late 2002.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of Area Days Greater than 100			Data Lag		1,290	Area Days

Baseline: The AQI provides information on pollutant concentrations for ground level ozone (O3), particulate matter (PM-10), carbon monoxide (CO), sulfur dioxide (SO2), and nitrogen dioxide (NO2). Of these 5 pollutants, only 4 (CO, O3, PM-10, and SO2) generally contribute to the AQI value. Ozone contributes 98% of the AQI days over 100 due to ozone in 1999. The proposed measure is a three year running average of the total metropolitan statistical area days (msa-days) above an AQI value of 100. This averaging helps to account for the variability (upward and downward swings) associated with the significant effect of meteorology on this metric. Since 1993, the running 3 year average of AQI msa-days > 100 has fluctuated with a high of 1,586 for 1993-1995, a low of 1,414 for 1997-1999 and the mean of the average number of msa-days from the three year periods 1991-1993 through 1998-2000 at 1,490. This is a new measure for 2003, EPA will use the mean for the previous 7 three year periods (1,490) as its estimate for 2001 and targeted a reduction of 100 total msa-days each year through 2003.

Research

PM Effects Research

In 2003	Describe health effects of PM and its components in normal and susceptible populations, mechanisms by which PM exerts adverse health effects, and analyze ambient and personal exposure to PM so that EPA has the necessary information to develop NAAQS that protect human health.
In 2001	EPA provided new information on the atmospheric concentrations, human exposure, health effects and mechanisms of toxicity of particulate matter.
In 2000	EPA provided new information on the atmospheric concentrations, human exposure, and health effects of particulate matter (PM), including PM2.5, and incorporated it and other peer-reviewed research findings in the second External Review Draft of the PM AQCD for NAAQS review.
In 1999	Completed three reports on PM: (1) describing research designed to test a hypothesis about mechanisms of PM-induced toxicity; (2) characterizing factors affecting PM dosimetry in humans; and (3) identifying PM characteristics (e.g. composition) associated with biological responses.
In 1999	Three projects completed: 1) pilot study of methods to assess PM effects on changes in cardiovascular and inflammatory endpoints; 2) long-term exposures to PM and effects on mortality and lung function; and 3) Interagency agreement with NIAID to support EPAs part of Inner City Asthma study.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Reports (1) describing research designed to test a hypothesis about mechanisms of PM-induced toxicity; 2) charct. factors affecting PM dosimetry in humans; 3) ID PM characteristcs (composition)	3 Reports					
Hold CASAC review of draft PM Air Quality Criteria Document.		1				review
Complete longitudinal panel study data collection & preliminary report on exposure of susceptible subpopulations to total PM & co-occurring gases of ambient origin and i.d. key exposure parameters...		1				report
Data generated from PM monitoring studies in Phoenix, Fresno, and Baltimore will be used to reduce uncertainties on atmospheric PM concentrations in support of Draft PM Air Quality Criteria Document.		30-Sep-2000				data
Reports on (1) role of host susceptibility factors, such as compromised cardiopulmonary systems, on responses to PM exposures and (2) data on regional deposited dose of inhaled ultrafine particles		30-Sep-2000				reports

Report on results from Baltimore study evaluating the cardio- vascular and immunological responses of elderly individuals to PM.		1		report
Delivery of computer model to assess the effect of spatial variability on human exposure as manifested by health.	1 model			
Reports on (1) long-term exposures to PM and effects on mortality and lung function.	1 manuscript			
Complete PM longitudinal panel study data collection and report exposure data.		1		study
Report on health effects of concentrated ambient PM in healthy animals and humans, in asthmatic and elderly humans, and in animal models of asthma and respiratory infection.		1		report
Final PM Air Quality Criteria Document completed.		0		final AQCD
Publish report on the empirical and theoretical lung deposition dose of ultrafine, fine, and coarse particles in elderly and mild asthmatic subjects under various breathing conditions.			1	report
Describe the relative importance of PM attributes (physical, chemical, and biological) on health outcomes in laboratory animals and humans.			1	evaluation
Ascertain attributes of susceptibility contributing to the responsiveness of cardiovascular- and pulmonary-compromised humans and laboratory animals.			1	analysis
Describe biochemical and neurogenic mechanisms by which PM modulates cardiovascular, hematological, and pulmonary functions.			1	evaluation
Report on the acute respiratory health effects of particulate matter and co-pollutants among asthmatic children in seven U.S. communities.			1	report

Baseline. At present, there is substantial evidence from epidemiological studies that increased levels of particulate matter (PM) are associated with increased frequency of death and disease, especially in the elderly, in individuals with cardiopulmonary disease, and in children. We still do not understand which PM components are responsible for increased mortality and morbidity, nor do we fully understand whether personal exposure to PM is reflective of exposure information obtained from fixed site monitoring. Our understanding of the biological mechanisms underlying these associations, and a fuller

understanding of populations which may be susceptible to PM are also only now beginning to emerge. As noted by the National Research Council, the EPA research program is well targeted to address these critical knowledge gaps and is well integrated with the extensive ambient air monitoring programs managed by state and local agencies. The results of the research efforts in 2003 will include development and application of new methods for assessing human exposure; identifying susceptible populations and major PM components responsible for toxicity, and characterizing mechanisms of toxicity leading to PM health effects, all of which will yield an improved scientific basis for setting National Ambient Air Quality Standards (NAAQS) for PM.

PM Measurement Research

In 2003	Provide updated data on PM source emissions, technology costs and performance, and air quality models so that States will have improved PM emissions inventories and compliance strategies for attaining the PM NAAQS and safeguarding public health.
In 2001	Provided new information on particulate matter source emissions, measurements, methods, and emissions-based air quality models to guide State Implementation Plan (SIP) development under the PM NAAQS.
In 2000	EPA developed particulate matter (PM) measurements, methods, emissions-based air quality models, and source emissions and control information to guide State Implementation Plan (SIP) development under the current PM NAAQS by completing the products below and other research activities.
In 1999	Awarded five (5) grants in June 1999 to establish Particulate Matter (PM) research centers for a period of five years, which will advance scientific understanding of the health effects of PM in the areas of exposure, dosimetry and modeling, toxicology, and epidemiology.
In 1999	Completed four reports on the following topics: 1) wood stove PM emissions (draft); 2) fine PM and organic speciation of fireplae emissions (draft); 3) fine PM characterization of heavy duty diesel vehicle exhause plumes (draft); and 4) characterizing PM emissions from mobile construction equipment.
In 1999	Release of Models-3/CMAQ-Version 2 for PM was completed

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Produce data on the size distribution of particles emitted from residential wood combustion (fireplac	2 Reports					
Produce improved receptor models (CMB8 and UNMIX) for measurement of source category emissions impacts on air quality.		2				models
Complete a preliminary evaluation of Models-3/Community Multi-Scale Air Quality (CMAQ) for PM, demonstrating its potential reliability for PM NAAQS attainment planning		30-Sep-2000				evaluation
In 1999 establish five airborne particulate matter (PM) research centers to conduct integrated studies on PM exposure, dosimetry and extrapolation modeling, toxicology and epidemiology.	5 Grant Awards					

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Publish a report on the size distribution of particles emitted from diesel trucks under various on-road conditions to improve source inventories for NAAQS implementation.	1		report
Publish peer reviewed documentation of the PM components of Models-3/CMAQ.	1		documentation
Prepare a report evaluating a new PM control technology, electrostatic fabric filtration, for use on coal-fired boilers.		1	report
To support the OAR PM regulatory program, produce a paper on emissions of ammonia from hog waste lagoons, both before and after application of mitigation techniques.		1	paper
Complete analysis of organic compounds in PM samples from combustion sources. Data will be used to update an OAR database used by states to determine sources of ambient PM.		1	compendium

Baseline: There are existing databases, measurement methods, models, and other tools used to support decisions concerning implementation of the NAAQS for PM. Recent scientific advances and proposed changes to the PM standard require additional research to update and validate the existing tools and to develop new tools. While much is known about the emissions and concentrations of sulfur oxides and nitrogen oxides that contribute to formation of PM in the ambient air, less is known about other variables such as emissions of ammonia and directly emitted PM, how to measure the organic and elemental fractions of PM, and the myriad atmospheric reactions that lead to PM formation. Improvements are needed to measure various PM components at high time resolution and better specificity and to determine the physical properties of PM including size fractions and composition in ambient monitoring networks. Improvements are also needed to better understand the effect of meteorological parameters and other factors that may bias the measurements. Studies to validate and upgrade emission based and receptor models are also needed to ensure these tools produce the best results possible to support NAAQS compliance decisions. Key needs include studies to validate PM concentrations generated by the model against actual field measurements, improved data on the composition of directly emitted PM to identify unique tracers that relate emissions from a specific source, and improvements in our understanding of PM formation in clouds and fogs and transport processes at the surface and aloft to upgrade model algorithms that calculate atmospheric PM formation. Finally, as new PM and multi-pollutant control technologies are developed, technical and economic assessments are needed to assess their viability. Federal, state, and local air quality officials will use the upgraded models, methods and other tools to design and implement existing and new PM and visibility standards.

OBJECTIVE 02: REDUCE AIR TOXICS RISK

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

Reduce Air Toxic Emissions

In 2003 Air toxics emissions nationwide from stationary and mobile sources combined will be reduced by an additional 3% of the updated 1993 baseline of 6.1 million tons (for a cumulative reduction of 40% from the 1993 level of 6.1 million tons per year.)

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

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Combined Stationary and Mobile Source Reductions in Air Toxics Emissions	12		5		3	Percent
Federal Register Publication of Final MACT Standards			4		19	Notices
Number of proposed MACT standards.			13		9	Proposed

Baseline: In 1993, the last year before the MACT standards and mobile source regulations developed under the Clean Air Act were implemented, stationary and mobile sources are now estimated to have emitted 6.1 million tons of air toxics. (EPA's prior estimate was 4.3 million tons.) Air toxics emission data are revised every three years to generate inventories for the National Toxics Inventory. Reductions are estimated from regulatory controls in the years between the three year updates. Using revised inventories and improved models, the estimate has been revised up from the previous estimate of 4.3 million tons.

OBJECTIVE 03: REDUCE ACID RAIN

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

Reduce SO2 Emissions

In 2003 Maintain or increase annual SO2 emission reduction of approximately 5 million tons from the 1980 baseline. Keep annual emissions below level authorized by allowance holdings and make progress towards achievement of Year 2010 SO2 emissions cap for utilities.

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that 2 million tons of NOx from coal-fired utility sources were reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.

In 2000 6.3 million tons of SO2 emissions from utility sources were reduced from 1980 baseline.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
SO2 Emissions		6,300,000	On track		5,000,000	Tons Reduced
NOx Reductions	30-Oct-2000					Tons Reduced

Baseline: The base of comparison for assessing progress on the annual performance goal is the 1980 emissions baseline. The 1980 SO2 emissions inventory totals 17.5 million tons for electric utility sources. This inventory was developed by National Acid Precipitation Assessment Program (NAPAP) and used as the basis for reductions in Title IV of the Clean Air Act Amendments. This data is also contained in EPA's National Air Pollutant Emissions Trends Report. Statutory SO2 emissions cap for year 2010 and later is at 8.95 million tons which is approximately 8.5 million tons below 1980 emissions level. "Allowable SO2 emission level" consists of allowance allocations granted to sources each year under several provisions of the Act and additional allowances carried over, or banked, from previous years.

Reduce NOx Emissions

In 2003 2 million tons of NOx from coal-fired utility sources will be reduced from levels that would have been emitted without implementation of Title IV of the Clean Air Act Amendments.

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that NOx emissions during ozone season from participating utility and industrial sources were below allowable level authorized by allowance (approximately 50% reduction from 1990 baseline).

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
NOx Reductions		2,000,000	On track		2,000,000	Tons Reduced

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

Reduce Ozone Season NOx Emissions

In 2003 Control NOx emissions during ozone season from participating utility and industrial sources to below allowable level authorized by allowances.

In 2001 End-of-year FY 2001 data will be available in late 2002 to verify that NOx emissions during ozone season from participating utility and industrial sources were below allowable level authorized by allowance (approximately 50% reduction from 1990 baseline).

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Ozone Season NOx Reductions			Data Lag		220,000	Tons Reduced

Baseline: Performance Baseline: The base of comparison for assessing performance on annual performance goals is the 1990 emissions baselines adopted in the state rules. The ozone season is 5 months long, May 1 to September 30. "Allowable NOx emissions level" is defined by the sum of allowance allocations authorized by various provisions in enabling state rules and allowances carried over, or banked, from previous years discounted by the Progressive Flow Control ratio. An allowance authorizes a source to emit one ton of NOx during the ozone season.

GOAL 02: CLEAN AND SAFE WATER

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

OBJECTIVE 01: ENSURE SAFE DRINKING WATER, FISH AND RECREATIONAL WATERS

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

Safe Drinking Water

In 2003	85 percent of the population served by community water systems will receive drinking water meeting health-based standards promulgated in or after 1998.
In 2003	92% of the population served by community water systems will receive drinking water meeting all health-based standards in effect as of 1994, up from 83% in 1994.
In 2003	93 percent of the population served by non-community, non-transient drinking water systems will receive drinking water for which no violations of Federally enforceable health standards have occurred during the year, up from 88% in 1994.
In 2001	91 percent of the population served by water systems received drinking water meeting all health-based standards that were in effect as of 1994.
In 2000	91% of the population served by community drinking water systems received drinking water meeting all health-based standards that were in effect as of 1994, up from 83% in 1994.
In 2000	93% percent of the population served by non-community, non-transient drinking water systems which received drinking water for which no violations of any federally-enforceable health-based standards occurred during the year.
In 1999	91% of the population served by community water systems received drinking water meeting all health-based standards in effect as of 1994, up from 83% in 1994.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Population served by non-community, non-transient drinking water systems with no violations during the year of any Federally enforceable health-based standards that were in place by 1994.		93	92		93	% population

Percent of population served by community drinking water systems with no violations during the year of any Federally enforceable health-based standards that were in place by 1994.	91	91		92	% Population
Population served by community water systems providing drinking water meeting health-based standards promulgated in or after 1998.				85	% Population

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

Drinking Water Systems Operations

In 2003 Enhance homeland security by securing the nation's critical drinking water infrastructure.

In 2003 Enhance protection of tribal health by increasing the percentage of tribal community and non-community water systems that are run by certified operators.

In 2003 Protect human health and ensure compliance with health-based drinking water standards through use of the Drinking Water State Revolving Fund (DWSRF).

In 2001 69% of tribal community and non-transient non-community water systems have a certified operator.

In 2001 Protected human health and ensured compliance with health-based drinking water standards by initiating 822 DWSRF operations and having 1,876 assistance agreements to community and non-community drinking water systems.

In 2000 528 eligible drinking water systems initiated operations that protect human health and ensure compliance with health-based drinking water standards through use of the Drinking Water State Revolving Fund (DWSRF).

In 1999 792 community drinking water systems received DWSRF funds that helped ensure that these systems provide drinking water that meets all health-based standards.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
DWSRF assistance agreements to community and non-community drinking water systems. (cumulative)		1411	1876		3,000	Agreements
Tribal community and non-transient non-community water systems with a certified operator.			69%		73%	Water systems

Percent of the population served by, and the number of medium-sized (10,001 - 100,000 served) community water systems that have completed or are conducting vulnerability assessments.					100%/3,416	% pop/systems
Percent of the population served by, and the number of, small (fewer than 10,000 served) community water systems that have completed or are conducting vulnerability assessments.					50%/25,100	% pop/systems
CWSs receiving DW SRF funds to help ensure that they provide drinking water that meets all health-based standards	792					CWSs
DWSRF projects that have initiated operations. (cumulative)		528	822		1,600	Projects

Baseline: In FY99, there were 792 DWSRF assistance agreements to community and non-community drinking water systems. DWSRF projects will begin to initiate operations in 2000 As of 1999, 56% of tribal community and non-transient non-community water systems had certified operators.

Rules for High-Risk Contaminants

In 2003	Ensure public health protection by identifying and studying potentially harmful contaminants in drinking water and developing, issuing, and revising regulations and/or guidance to limit exposure to contaminants found to be harmful to people.
In 2001	Expanded public health protection through the promulgation of arsenic, radionuclides, filter backwash, and made 9 determinations whether or not to regulate potentially harmful contaminants from the CCL.
In 2000	Radon & arsenic regulations were promulgated/proposed respectively, & 5 rules were implemented to ensure protection from high-risk contaminants.
In 1999	EPA developed major risk analyses for microbial and chemical contaminants to support selection of contaminants to be regulated.
In 1999	EPA issued and began implementing two protective drinking water standards for high- risk contaminants, including disease-causing micro-organisms (Stage 1 Disinfection/Disinfection Byproducts and Interim Enhanced Surface Water Treatment Rules).
In 1999	EPA promulgated the monitoring of unregulated contaminants rule ensuring that the highest risk contaminants are identified and managed

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of health risk assessments started/completed for contaminants that are potentially harmful to people.			9			Assessments

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Regulatory determinations for potentially harmful contaminants.			5			Determinations
Number of regulations and associated technical guidance documents proposed/promulgated					2/1	Regs/guidances
States, including DC and PR, that have received training and technical assistance on 4 of the rules that are being implemented.		52				States, DC, PR
States submitting primacy revisions and number with signed extension agreements for primacy.		33/30				States
Risk analyses for microbial/chemical contaminants.	1					List
Regulations promulgated that establish protective levels for high-risk contaminants	2					Rules
Availability of monitoring of unregulated contaminants rule.	1					Regulation
Regulations promulgated/proposed.		2	3			Regulations

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

Underground Injection Well Management

In 2003 Target implementation of UIC regulations to ensure low risk of contamination to source water resources.

In 2001 Through the UIC program, EPA contributed to the protection of ground water sources of drinking water from potential endangerment by bringing 11,266 Class IV/V wells under specific controls through permits or closure.

In 2000 Increased protection of ground water resources by bringing 500 Class IV/V wells under specific controls through permits or closures and by plugging 3,852 underground injection wells.

In 1999 Data for underground injection wells tested and passed for mechanical integrity is expected to be available in March 2000.

In 1999 The draft regulation for UIC Class V wells that will protect groundwater sources of drinking water from potential endangerment was completed and made available for public comment in fiscal year 1999. The final rule was published in the Federal Register on December 7, 1999.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
States that have formally adopted the Class V rule.			8			States

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Class IV/V wells (by well type) brought under specific controls through permits or closures.		500	11,266		Wells
Issue proposed Phase 2 UIC Class V regulatory action.			1		Action
Number of motor vehicle disposal wells closed and/or permitted. (Class V)				400	Wells
Percentage of underground injection wells out of compliance with a permit and/or rule authorized that are returned to compliance in an appropriate and timely manner. (Classes I, II, and III only)				90	% wells
Availability of UIC Class V Regulation	0				Final Reg
Underground Injection wells tested and passed for mechanical integrity	TBD				% Wells
States, including DC and PR, that have received training and technical assistance on the Class V Rule.		50			States, DC, PR
UIC wells plugged as a direct action by the UIC program or indirectly by another program working in partnership with UIC to protect ground water sources of drinking water.		3,852	2,766		Wells

Baseline: As of January 2000, no states had adopted the Class V Rule as the Rule was just finalized in December 1999.

River/Lake Assessments for Fish Consumption

In 2003	Reduce consumption of contaminated fish by increasing the information available to States, Tribes, local governments, citizens, and decision-makers.
In 2001	9% of the nation's river miles and 23% of nation's lake acres have been assessed to determine if they contain fish and shellfish that should not be eaten or should be eaten in only limited quantities.
In 2000	7% of the nation's river miles and 16% of the nation's lake acres have been assessed to determine if they contain fish and shellfish that should not be eaten or should be eaten in only limited quantities.
In 1999	7% of river miles and 15% of lake acres were assessed for the need for fish advisories.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Lake acres assessed for the need for fish advisories and compilation of state-issued fish consumption advisory methodologies. (cumulative)		16	23		29	% lake acres
States/Tribes monitoring and conducting assessments based on the national guidance to establish nationally consistent fish advisories.	25	40	40/41		45	States/Tribes
River miles assessed for the need for fish consumption advisories & compilation of state-issued fish consumption advisory methodologies. (cumulative)	7	7	9		11%	River miles

Baseline: In 1999, 7% of the Nation's rivers and 15% of the Nation's lakes were assessed to determine if they contained fish that should not be eaten or should be eaten in only limited quantities. In September 1999, 25 states/tribes are monitoring and conducting assessments based on the national guidance to establish nationally consistent fish advisories. In the upcoming 2000 Report to Congress on the National Water Quality Inventory, 69% of assessed river and stream miles; 63% of assessed lake, reservoir, and pond acres; and 53% of assessed estuarie square miles supported their designated use for fish consumption. For shell fish consumption, 77% of assessed estuary square miles met this designated use.

Increase Information on Beaches

In 2003 Reduce human exposure to contaminated recreation waters by increasing the information available to the public and decision-makers.

In 2001 Reduce exposure to contaminated recreation waters by providing information on 2,354 beaches for which monitoring and closure data is available to the public and decision-makers.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Beaches for which monitoring and closure data is available to the public at http://www.epa.gov/OST/beaches/. (cumulative)		1,981	2,354		2,450	Beaches
Number of eligible States that have started/completed development of monitoring and notification programs consistent with the BEACHES legislation.					15/5	States
Fish tissue samples collected (cumulative).		128				Samples

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States for which data is entered into the public right-to-know database on beach monitoring and closures.	26	States

Baseline: By the end of FY1999, 33 states had responded to EPA's first annual survey on state and local beach monitoring and closure practices, and EPA made available to the public via the Internet information on conditions at 1,403 specific beaches. In the upcoming 2000 Report to Congress on the National Water Quality Inventory, 72% of assessed river and stream miles; 77% of assessed lake, reservoir, and pond acres; and 85% of assessed estuarie square miles met their designated uses for recreation (primary contact).

Source Water Protection

In 2003 39,000 community water systems (representing 75% of the nation's service population) will have completed source water assessments and 2,600 of these (representing 10% of the nation's service population) will be implementing source water protection programs.

In 2001 States and community water systems increase efforts and programs to protect their source water resources, including ground water

In 2000 49 States and 5,000 community water systems increased efforts and programs to protect their source water resources including ground water

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Population served by community water systems that are implementing efforts to protect their source water resources.		30.5				People
CWSs implementing efforts to protect their source water resources.		5,000	2,026			CWSs
Number of community water systems and percent of population served by those CWSs that have completed their source water assessments.					75%/39,000	Percent/systems
Number of community water systems and percent of population served by those CWSs that are implementing source water protection programs.					10%/2,600	% pop/systems
CWSs with ground or surface water protection programs in place	11,011					CWSs
States that are implementing their EPA-approved source water protection assessment programs		49				States

Baseline: EPA has defined implementation as undertaking 4 or more of 5 stages of source water protection. Nearly 264 million people are estimated to be served by CWSs in 2001.

Research

Drinking Water Research

In 2003	The Office of Water will have data, methods, assessments, and technology evaluations necessary to make scientifically sound risk assessment and risk management decisions on unregulated drinking water contaminants of potential public health concern.
In 2001	EPA reduced uncertainties and improved methods associated with the assessment and control of risks posed by exposure to microbial contaminants in drinking water with a focus on the emerging pathogens on the CCL.
In 2000	EPA completed reports that provide important information about new DBPs in drinking water, the risks that may be posed by exposures to mixtures of these contaminants, and methods for improving the interpretation of data from published DBP epidemiology studies.
In 2000	EPA reduced uncertainties and improved methods associated with the evaluation and control of risks posed by exposure to arsenic in drinking water by completing the products below and other research activities.
In 2000	EPA reduced uncertainties and improved methods associated with the evaluation and control of risks posed by exposure to microbial contaminants in drinking water by completing the products below and other research activities.
In 1999	An interim report on modeling methods for estimating the vulnerability of ground water to viral contamination is delayed until the end of FY 2001.
In 1999	Produced data on the role of micronutrient status on the metabolism/toxicity of arsenic, as well as data on the first city study on microbial enteric disease. In addition, completed hazard identification and screening studies on reproductive/developmental effects of selected DBPs.
In 1999	The draft Comparative Risk Framework Methodology and Case Study was provided to the Science Advisory Board (SAB) Drinking Water Subcommittee for its review.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Data on first city study on microbial enteric disease.	30-Sep-1999				
Complete hazard i.d./screening studies on reproductive/developmental effects of selected DBPs.	30-Sep-1999				
Interim report on modeling methods for estimating the vulnerability of ground water to viral contamination.	30-Sep-2001				
Report assessing the feasibility of attaining/constructing refined DBP exposure information for extant epidemiologic drinking water studies.					report

Report on the identification of new DBPs in drinking water formed by alternative disinfectants.		1			report
Complete a peer-reviewed report on the impacts of mixtures of selected DBPs on cancer and various noncancer endpoints, including reproduction and developmental effects, from animal studies.		1			report
Report on waterborne disease outbreaks in the U.S.		1			report
Evaluation of Method 1622 for Cryptosporidium for use in the Information Collection Rule.		1			evaluation
Describe different technologies for cost/effective control of Cryptosporidium oocysts and DBPs.		30-Sep-2002			description
Report summarizing the results of two additional treatment evaluations for arsenic control.		1			report
Add comparative Risk Framework Report	1 Report				
Report on occurrence of CCL-related pathogens in source and drinking water, such as mycobacterium and Aeromonas			1		report
Publish screening treatability studies for at least two microbes on the Candidate Contaminant List (CCL) to determine if these contaminants are effectively inactivated by conventional treatment.			2		studies
Report on the potential health risks associated with three CCL microbial pathogens.				1	report
Develop methodology to identify and characterize H. pylori, Cyclospora, caliciviruses and sources of human pathogens in water.				1	method
Publish a technical report on treatability of three chemicals in the 1998 Contaminant Candidate List to provide information to the program office for use in the regulatory determination.				1	report
Report on waterborne disease in the young and elderly in Washington State community intervention study.				1	report
Provide report on hazard and risk characterization issues for potentially susceptible subpopulations for chemicals on the Contaminant Candidate List				1	report

Baseline: The Safe Drinking Water Act Amendments of 1996 establish a process and timeline for EPA to make decisions about the regulation of waterborne pathogens and chemicals for which standards have not been previously established. The ability of EPA to identify potential candidates for regulation and to make scientifically sound regulatory decisions is dependent upon the availability of adequate information concerning the assessment and control of these contaminants. The current list of unregulated microbes and chemicals, called the Contaminant Candidate List (CCL), includes over 60 contaminants. The quality and robustness of the data base on health effects, exposure and treatability of these contaminants is highly variable. Some microorganisms on the CCL, for example, lack suitable analytical methods that are necessary for determining their viability and occurrence in drinking water samples. Basic information on the health effects of selected CCL chemicals are lacking, and the ability of conventional treatment technologies to remove or inactivate some of the contaminants has not been clearly established. Research conducted in support of this APG will provide new health effects and exposure data, analytical methods, risk assessments and technological evaluations on several high priority pathogens and chemicals. This will strengthen the scientific foundation for the next CCL and for future regulatory determinations on these contaminants.

OBJECTIVE 02: PROTECT WATERSHEDS AND AQUATIC COMMUNITIES

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

Assessments of Designated Uses

In 2003	Assess, restore and protect watersheds.
In 2001	Assessed 132.1 river miles/lake acres, and 6,057 square estuary square miles that have water quality supporting designated uses, where applicable, for drinking water supply.
In 2001	Continued to restore and protect watersheds through implementation of over 2,300 TMDLs.
In 2000	Improved assessment of progress toward attainment of designated uses as indicated by electronic 305(b) submissions from 43 States, Tribes, and Territotites.
In 2000	Of the 2,674 water segments previously identified and analyzed by states as being polluted, states submitted TMDLs for 2,167 water segments. EPA approved 1,276 TMDLs submitted by states, and EPA established 166 TMDLs. Due to the large number of TMDLs submitted, not all TMDLs were addressed.
In 1999	29 States have electronically updated their 1998 305(b) information which reflected adequate monitoring and assessment programs (Base of 0).

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Assessed river miles/lake acres/estuary square miles that have water quality supporting designated beneficial uses, where applicable, for drinking water supply			132K/6M		no target	Mi/Acres
Assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses, where applicable, for fish and shellfish consumption.			174K/5M/7K		no target	Mi/Acres/Sq Mi
Assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses, where applicable, for recreation.			269K/10M/18K		no target	Mi/Acres/Sq Mi
TMDLs established by EPA. (cumulative)		166	870		1,245	TMDLs
TMDLs scheduled to be completed by the end of 2001. (cumulative)		2,674	3,826			TMDLs
Impaired, assessed river miles, lake acres, & estuary square miles that a) are covered under WRAS and b) were restored to their designated uses during the reporting period.						
Assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses, where applicable, for aquatic life support.			406K/9M/11K		no target	Mi/Acres/Sq Mi
TMDLs submitted by the state. (cumulative)		2,167	2,882			TMDLs
State-established TMDLs approved. (cumulative)		1,276	2,872		9,200	TMDLs
States electronically submit updated 305(b)	29					States
States, Tribes, and Territories electronically submit updated 305(b).		43				States, etc.
Submission, with Nat'l Watershed Forum, of a Watershed Rest. Progress Report to the President, etc. eval. progress & recommend. any actions needed to improve progress toward meeting clean water goals.		0				Report

Baseline: From the upcoming 2000 Report to Congress on the National Water Quality Inventory, the miles/aces quantities reported in the FY 2001column translate into the following percentages of waters: 66% of assessed river and stream miles; 73% of assessed lake, reservoir, and pond acres; and 49% of assessed estuary square miles have water quality supporting designated beneficial uses for aquatic life support. Likewise 69% of assessed river and stream miles, 63% of assessed lake, reservoir and pond acres, and 53% of assessesd estuary square miles have water quality supporting their designated

use for fish consumption. 86% of assesssed river and stream miles and 83% of lake, reservoir and pond acres support their designated use for drinking water supply

Watershed Protection

In 2003 By FY 2003, Water quality will improve on a watershed basis such that 600 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.

In 2001 Water quality improved on a watershed basis such that 510 of the Nation's 2,262 watersheds will have greater than 80 percent of assessed waters meeting all water quality standards, up from 500 watersheds in 1998.

In 2000 Environmental improvement projects are underway in 324 high priority watersheds which are resulting in real water quality improvements in impaired watersheds.

In 1999 23 States submitted implementation plans to EPA (either as separate plans or as part of water quality management plans or other watershed planning process) that describe the processes for implementing TMDLs developed for waters impaired solely or primarily by nonpoint sources.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Watersheds that have greater than 80% of assessed waters meeting all water quality standards.			510		600	8-digit HUCs
States submitting implementation plans for TMDLs for waters impaired solely or primarily by NPS	23					States
States that are conducting or have completed unified watershed assessments	56					States
High priority watersheds in which environmental improvement projects are underway as a result of implementing activities under the CWAP.		324				Watersheds

Baseline As of 1998 state reports, 500 watershed had met the criteria for water quality improving on a watershed basis. For a watershed to be counted toward this goal, at least 25% of the segments in the watershed must be assessed within the past 4 years consistent with assessment guidelines developed pursuant to section 305(b) of the Clean Water Act.

State/Tribal Water Quality Standards

In 2003	36 Percent of Tribes will have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems.
In 2003	Assure that States and Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities.
In 2001	21 States and 19 Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities.
In 2001	22% of Tribes have water quality monitoring and assessment programs appropriate for their circumstances and will be entering water quality data into EPA's national data systems
In 2000	35 States and 16 Tribes have effective, up-to-date water quality standards programs adopted in accordance with the Water Quality Standards regulation and the Water Quality Standards program priorities.
In 1999	EPA reviewed and approved 17 revised water quality standards for 17 states that reflect current guidance, regulation, and public input and promulgated replacement Federal standards for 1 additional state.
In 1999	One additional Tribe established an effective water quality standards program for a cumulative total of 15 Tribes with effective water quality standards programs. In addition, 7 more tribal submissions are currently under review.
In 1999	Provided to States and Tribes tools for risk characterization of and decision making regarding surface water contaminants, including PBTs and nutrients, that allow them to set and meet their own water quality standards.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Tribes with monitoring and assessment programs. (cumulative)			22		36	% Tribes
Pilot STORET/305(b) reporting projects with Tribes.			2			Pilot projects
States with new or revised water quality standards that EPA has reviewed and approved or disapproved and promulgated federal replacement standards.			21		20	States
States and tribes with approved E. coli or enterococci criteria.					55	States
States with new or revised water quality standards that EPA has reviewed and approved or disapproved.	17					States
Models,methods,criteria developed/available for risk characterization of surface water contaminants.	1					List

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Tribes with water quality standards adopted and approved (cumulative).	15	16	19		30	Tribes

Baseline: In 1999, less than 5% of tribes had water quality monitoring and assessment programs appropriate for their circumstances and were entering water quality data into EPA's national data systems. State water quality standards program reviews are under a 3-year cycle as mandated by the Clean Water Act under which all states maintain updated water quality programs. The performance measure of state submissions (above) thus represents a "rolling annual total" of updated standards acted upon by EPA, and so are neither cumulative nor strctly incremental. EPA must review and approve or disapprove state revisions to water quality standards within 60-90 days after receiving the state's package. As of this May EPA was overdue in approving or disapproving 38 new or revised standards from 21 states and tribes.

Protecting and Enhancing Estuaries

In 2003 Restore and protect estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs)

In 2001 Restored and protected 70,000 acres of estuaries through the implementation of Comprehensive Conservation and Management Plans (CCMPs).

In 2000 Completed Comprehensive Conservation and Management Plans (CCMPs) for 1 of the National Estuary Programs for a cumulative toal of 22 out of 28.

In 1999 Completed Comprehensive Conservation and Management Plans (CCMPs) for 4 of the National Estuary Programs for a cumulative total of 21 out of 28.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Priority actions or commitments initiated nationwide as part of the National Estuary Program since approval of the first CCMP in 1991. (cumulative)			83			Actions
Acres of habitat restored and protected nationwide as part of the National Estuary Program. (annual)			70,000		25,000	Acres
Completed CCMPs	21	22				CCMPs

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

Gulf of Mexico

In 2003 Assist the Gulf States in implementing watershed restoration actions in 14 priority impaired coastal river and estuary segments.

In 2003 Support projects with the goal of creating, restoring, or protecting 2400 acres of important coastal and marine habitats per year (incremental).

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In 2001 Assisted the Gulf States in implementing watershed restoration action strategies (WRAS) or their equivalent in 37 priority coastal river and estuary segments.

In 2000 Assisted the Gulf states in implementing watershed restoration action strategies (WRAS) or similar plans to restore waterbodies in 14 priority impaired coastal river and estuary segments.

In 1999 Initiated the development of marine conservation plans for Gulf Coast seagrasses in 3 Gulf States.

In 1999 Reduced the number of nonpoint sources contributing to the total load of fecal contamination and nutrients in Gulf waters, in three priority Gulf coastal watersheds.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Impaired Gulf coastal river and estuary segments implementing watershed restoration actions (incremental).		31	37		14	Segments
TMDLs (1) scheduled to be completed; (2) submitted by Gulf States for segments in the coastal watershed; and (3) established by EPA and; (4) Gulf State established TMDLs approved.			79 / 851 / 32			TMDLs
Assessed river miles, lake acres, and estuary square miles that a) are covered under WRAS and b) were restored to their designated uses during the reporting period.						Miles, etc.
Increase acreage and restore or protect coastal and marine habitats by 2009 (incremental).					2,400	Acres
Gulf states with marine conservation plans for seagrasses.	3					States
Gulf watersheds with State actions to reduce NPS loads to Gulf growing waters.	3					Watersheds

Baseline: There are currently 95 coastal watersheds at the 8-digit hydrologic unit code (HUC) scale on the Gulf coast. The Gulf of Mexico Program has identified 12 priority coastal areas for assistance. These 12 areas include 30 of the 95 coastal watersheds. Within the 30 priority watersheds, the Gulf States have identified 354 segments that are impaired and not meeting full designated uses under the States' water quality standards. 71 or 20% is the target proposed to reinforce Gulf State efforts to implement 5-year basin rotation schedules. The target of 71 is divided by 5 to achieve the goal for assistance provided in at least 14 impaired segments each year for the next 5 years.

Wetland and River Corridor Projects

In 2003 Support wetlands and stream corridor restoration and management and assessment/monitoring of overall wetland health.

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In 2001	Supported 108 wetlands and stream corridor restoration and management projects and continued our efforts assessment/monitoring of overall wetland health
In 2000	4 States/Tribes developed wetlands assessment and monitoring tools and provided financial assistance to 74 wetlands restoration (other than Five-Star) projects.
In 1999	EPA provided funding to restore wetlands and river corridors in 46 watersheds that met specific "Five Star Project" criteria relating to diverse community partnerships (for a cumulative total of 57 watersheds).

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Watershed-based wetland restoration projects to which EPA has provided financial support (other than 5-Star Projects) and/or has contributed significant technical assistance. (cumulative)		74	108			Projects
Watershed-/community-based wetlands/river corridor restoration projects funded by EPA's Five Star Program (cumulative).						Projects
Watershed-/community-based wetlands/river corridor restoration projects funded by EPA's Five Star Program.	57					Projects
States/tribes developing formal programs and wetlands assessment capacities, aimed toward measuring wetland gain, loss and/or deterioration.			0			States/Tribes
Watershed-based wetlands restoration projects to which EPA has provided financial assistance (including 5-Star projects) and/or has contributed significant technical assistance. (cumulative)					550	Projects

Baseline: Going into FY99, 11 states/tribes had met the criteria for establishing formal assessment/monitoring programs.

Chesapeake Bay Habitat

In 2003	Improve habitat in the Chesapeake Bay.
In 2001	Improved habitat in the Chesapeake Bay by reducing 48.1 million pounds of nitrogen, 6.84 million pounds of phospherous and restored over 69,000 acres of submerged aquatic vegetation.
In 2000	In the Chesapeake Bay watershed, 1,032 stream miles of migratory fish habitat was reopened through the provision of fish passages, construction and restoration of 11,000 acres of oyster habitat, and 41% of wastewater flow to the Bay was treated by Biological Nutrient Removal.

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In 1999 Submerged aquatic vegetation acres increased to 63,500; 11,000 acres designated for aquatic reef habitat; 32% of wastewater flow treated by Biological Nutrient Removal; 79% of lands have voluntary integrated pest management practices; and 534 stream miles of migratory fish habitat have reopened.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Pounds reduction, from 1985 levels, of nitrogen and phosphorus loads entering Chesapeake Bay. (cumulative)			48.1 / 6.84 M			Pounds
Miles of streambank and shoreline restored with riparian forest buffers. (cumulative)			711		896	Miles
Wastewater flow to the Chesapeake Bay treated by biological nutrient removal. (cumulative)	32	41	47		58	% WW flow
Percent shallow waters that meet water clarity requirements for submerged aquatic vegetation.					15	% waters
Acres of submerged aquatic vegetation (SAV) present in the Chesapeake Bay. (cumulative)	63500	68,125	69,126		80,000	Acres
Acres of aquatic reef habitat designated, with construction and restoration of oyster reef habitat to occur within those areas.	11000	11,000				Acres
Agricultural, recreational and public lands that have *voluntary integrated pest management (IPM) practice* established in the Chesapeake Bay watershed (cumulative).	79					% lands
Stream miles of migratory fish habitat reopened through provision of fish passages. (cumulative)	524	1,032	816		1,243	Miles

Baseline: In 1985, 0% of wastewater flow had been treated by Biological Nutrient Removal. In 1989, 49 miles of migratory fish habitat was reopened. In 1984, there were 37,000 acres of submerged aquatic vegetation in the Chesapeake Bay. In 1988, voluntary IPM practices had been established on 2% of the lands in the Chesapeake Bay watershed.

Tribal Environmental Water Presence

In 2003 70 Percent of Tribes will have a "water program environmental presence" (i.e., one or more persons, as appropriate, with environmental capability to advise Tribal governments on developing and implementing programs).

In 2001 47% of Tribes have a "water program environmental presence" (i.e., one or more persons, as appropriate, with environmental capability to advise Tribal governments on developing and implementing programs).

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Tribes with a water program presence. (cumulative)			47		70	% Tribes

Baseline. As of 1999, approximately 20% of Tribes have a "water program environmental presence."

Research

Contaminated Sediments

In 1999 Submitted two journal articles for peer review on the biotreatment of PAH contaminated sediments and the treatment of chlorinated organics in sediment. This information will assist regulators in developing strategies to treat dredged contaminated sediments and thereby recover scarce CDF capacity.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Publish peer reviewed journal article on biotreatment of PAH contaminated sediment.	1 Article				
Publish peer reviewed journal article on treatment of chlorinated organics in sediment.	1 Article				

Baseline:

Scientific Rationale for Surface Water Criteria

In 2003 Provide the science and data management scheme for the 303(d) listing process to include classification systems for surface waters, watersheds, and regions so that states will have an improved and reliable means of identifying impaired water bodies.

In 2003 Provide updated models for stormwater management, and for allocating suspended solids and sediment loads, and related uncertainties for mixed land use watersheds so that state and local resource managers can make improved scientifically-based decisions that protect aquatic resources and human health

In 2001 Developed (and published jointly as part of Office of Water guidance) the framework for diagnosing adverse chemical pollutants in surface waters.

In 2000 EPA developed a conceptual framework for the diagnosis and assessment of water quality impairment in U.S. watersheds by completing the products below and other research activities.

In 2000 EPA developed the scientific rationale for numerical criteria for surface waters by completing the products below and other research activities.

In 2000	EPA identified the primary life support functions of surface waters that contribute to the management of sustainability of watersheds by completing the products below and other research activities.
In 1999	Completed reports on the requirements of submerged vegetation in coastal environments, and on predicting metal toxicity in sediments. In addition, developed a research strategy on the scientific gaps in the areas of developing and implementing biocriteria.
In 1999	Completed research strategy for integrating economic assessment with ecological risk assessment of aquatic stressors. Produced three publications on knowledge based approaches to watershed assessments, and a fourth on ecosystem classification and mapping.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Report on the requirements of submerged aquatic vegetation in coastal environments.	30-SEP-1999					
Develop and provide a research strategy for integrating economic assessment with ecological risk assessment of multiple aquatic stressors applied at two locations.	30-SEP-1999					
Complete Clinch and Powell Watershed Risk Assessment.			0			assessment
Develop a research strategy for development of numerical criteria for surface waters.		30-Sep-2000				requirements
Research strategy document to determine the impact of landscape changes on wetland structure and function.		1				strategy
Complete guidance document on acquiring data for conducting watershed analyses for multiple stressors and receptors.		1				guidance doc
Complete report on an assessment of the viability of natural attenuation as an option for the risk management of contaminated sediments.		1				assessment
Complete and publish a compendium of case studies illustrating the application of the Stressor Identification Guidelines.			1			compendium
Decision-support tools and guidance for watershed scale assessments; report on risk characterization for watersheds.			30-Sep-2001			
Report on Sediment Toxicity.			0			report
Classification frameworks for geographic regions and at the watershed, water body, and habitat scale.					1	report

Prepare a document for use by states to assist in modeling risk management options and restoration measures in waterbodies impaired due to suspended solids and sediment.	1	document
Complete report on selected methods for integrating ecological risk assessment and economics to support watershed decision-marking.	1	report

Baseline: The State and EPA implementation of processes to identify impaired waters and restore them via a wide array of programs, including the TMDL process, requires assessment of waters and listing them as impaired. Recent Congressionally directed National Academy of Sciences studies note that the Agency's approach to listing impaired waters (the 3030(d) process) is not complete (i.e., a substantial quantity of the Nation's waters remain un-assessed) and is not scientifically robust (it appears that some listed waters may be inappropriately identified or mis-characterized). Accordingly, ORD has embarked on a focused research program to develop the monitoring, diagnostic, and classification schemes to improve the Agency and State approaches to this listing process. While this is a national requirement, regional and watershed, as well as biological, differences must be factored into the process.

The States and other reporting and assessment entities have listed sediments as a major cause of water body and watershed impairment. Urban storm water has also been identified as a major source of impairment. In addition the National Academy of Science report on TMDLs has called for the increasing characterization and use of uncertainty in modeling for TMDLs. In the case of storm water management, TMDL guidance may require permits for storm water and hence the urgent need to both improve the science of modeling such systems and the additional need to include uncertainty analysis techniques as part of the modeling process. Accordingly, ORD's research has been directed to provide updates in the modeling capability for this important national problem and to increase the capability of modelers and TMDL analysts to provide more robust and cost-effective outcomes for water bodies impaired by sediments.

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OBJECTIVE 03: REDUCE LOADINGS AND AIR DEPOSITION

By 2005, reduce pollutant loadings from key point and nonpoint sources by at least 11 percent from 1992 levels. Air deposition of key pollutants will be reduced to 1990 levels.

Reducing Industrial Pollutant Discharge

In 2001 Millions of pounds of industrial discharges of pollutants to the nation's waters were significantly eliminated through implementation of effluent guidelines.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Reduction in loadings for toxic pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as compared to 1992 levels as predicted by model projections. (cumulative)		3.8	10.3			Pounds
Reduction in loadings for conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as compared to 1992 levels as predicted by model projections. (cum)		472.7	557.0			Pounds
Reduction in loadings for non-conventional pollutants for facilities subject to effluent guidelines promulgated between 1992 & 2000, as compared to 1992 levels as predicted by model projections. (cum)		135.6	922.0			Pounds

Baseline: Loading reduction estimates are based on model projections from effluent guidelines promulgated between 1992 and 1999, with both the numbers of affected facilities and permits estimated Flow data is not available for some point sources in PCS.

NPDES Permit Requirements

In 2003	Current NPDES permits reduce or eliminate loadings into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities (direct and indirect dischargers); and (2) pollutants from urban storm water, CSOs, and CAFOs.
In 2001	Maintaining current NPDES permits aid in the reduction or eliminatation of discharges into the nation's waters of inadequately treated discharges from municipal and industrial facilities; and pollutants from urban storm water, CSOs, and CAFOs.
In 2000	Current NPDES permits reduced or eliminated discharges into the nation's waters of (1) inadequately treated discharges from municipal and industrial facilities; and (2) pollutants from urban storm water, combined sewer overflows (CSOs), and concentrated animal feeding operations (CAFOs).
In 1999	513 communities implemented requirements in Stormwater Phase I permits (MS4s) and / or CSO Long Term Control Plans (LTCPs) that are anticipated to contribute to improvements in their local watersheds.
In 1999	71% of major point sources are covered by current NPDES permits.
In 1999	830 CSO communities (92%) are covered by permits or other enforceable mechanisms consistent with the 1994 CSO policy. (Note: this result may reflect overcounting and implementation of only portions of the CSO Policy.)
In 1999	An assessment of necessary elements of a comprehensive general permit has been developed to aid Regions and States in issuing permits to concentrated animal feeding operations.

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In 1999	Cannot determine # of industrial and construction stormwater sources. Can determine # of states that issue permits. For all industrial activities operating in the state, 92% of states and territories and for construction sites over 5 acres, 88% of states and territories have current permits.
In 1999	It was determined that developing a national inventory of AFOs and estimates of pollutant loadings was not feasible since there are as many as 450,000 AFOs and rapid changes are occurring in a number of facilities.
In 1999	Quantified the number of AFOs that were permitted by EPA and states and the extent the permits included manure management requirements.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Major point sources are covered by current permits.		72	75		90%	Point Sources
States with current storm water permits for construction sites over 5 acres.		89	91			% States
States with general NPDES permits for CAFOs > 1,000 animal units or with individual NPDES permits for all CAFOs > 1,000 animal units consistent with the AFO Strategy and guidance.		48	59			% States
Permittees (among the approximately 900 CSO communities nationwide) that are covered by NPDES permits or other enforceable mechanisms consistent with the 1994 CSO policy.	92	90	87			% permittees
Minor point sources are covered by current permits.		70	75		84%	Point Sources
States with current storm water permits for all industrial activities operating in the state.		83	92			% States
Loading reductions (pounds per year) of toxic, non-conventional, and conventional pollutants from NPDES permitted facilities (POTWs, Industries, SIUs, CAFOs, SW, CSOs).					500 million	pounds
Pounds of pollutants prevented from being discharged into waters due to field technical assistance at 775 municipal wastewater treatment plants.					12,000	pounds
Permits on 303(d) listed waterbodies which implement EPA approved TMDLs.					90	% permits
Completion of AFO documents	1					Document
Inventory of Animal Feeding Operations/estimate loadings	0					Inventory
Quantity of AFOs which are permitted	1					List

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Major point sources that have a current NPDES permit.	71	% Maj. Pt. Srcs
Communities that will have local watersheds improved by controls on CSOs and stormwater	513	Communities
Facilities w. a discharge requiring an indiv. permit that a) are covered by a curr. indiv. NPDES perm.; b) have expir. perm.; c) have applied but not been issued a perm.; & d) have perm. under appeal		
Storm water sources assoc. with indust. activity, construction sites over 5 acres, and desig. storm water sources (incl. municipal Phase I) that are covered by a current indiv. or gen. NPDES permit.	Not available	% SW sources

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

Construction Grant and Special Project Closeout

In 2003 Reduce point source loadings by closing out within 7 years projects funded under Clean Water Act Title II (construction grants) awarded after FY 91 and Special Project Stag Grants.

In 2001 Reduced point source loadings by expediting completion of 37 projects funded under Clean Water Act Title II (construction grants) and special project STAG grants.

In 2000 Reduced point source loadings by expediting completion of projects funded under Clean Water Act Title II (construction grants) projects and special project State and Tribal Assistance Grants (STAG).

In 1999 340 construction grants projects remain to be closed out.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Construction grants projects awarded after FY91 closed out within 7 years of grant award.			79			% grants
Construction grants projects awarded before FY92 remaining to be closed out.		175	138			Projects

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Construction grants projects (both those awarded before FY92 and after FY91) remaining to be closed out.	340					Projects
Percentage of Construction Grants and Special Project Grants closed out within 7 years of award.					90	% grants
Special project STAG grants closed out within 7 years of grant award.			78			% Grants

Baseline: As of September 1998, 439 construction grants projects remained to be closed out, according to biannual reports from the Regions. As of September 1998, three special project STAG grants had been closed out according to biannual reports submitted by the EPA Regions to EPA Headquarters. Special project STAG grants were first established in 1994.

Effluent Guidelines

In 2003 Develop effluent guidelines that when implemented are expected to reduce pollutant loadings into surface waters.

In 2003 Develop regulations for cooling water intakes that when implemented are expected to reduce harm to aquatic life.

In 2001 Took final action on 1 and proposed 4 effluent guidelines limitations for industrial categories that contribute significantly to pollution of surface waters.

In 2000 Took action on effluent guidelines limitations for industrial categories that contribute significantly to pollution of surface waters.

In 1999 Took final action on one and proposed two effluent guidelines limitations for industrial categories that contribute significantly to pollution of surface waters.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of effluent guidelines proposed or promulgated.	2/1	1/4	4 / 1			Rules
Number of cooling water intake (316(b)) regulations proposed or promulgated.					1/1	Rules
At least 150 million pounds of pollutants eliminated from waters of the U.S. as a result of two final effluent guidelines.					150	million pounds

Baseline: Loading reduction estimates are based on model projections from the effluent guidelines, with both the numbers of affected facilities and permits estimated.

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Clean Water State Revolving Fund: Annual Assistanc

In 2003	900 projects funded by the Clean Water SRF will initiate operations, including 515 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 8,800 projects will have initiated operations since program inception.
In 2003	Reduce point and nonpoint source loadings by managing the $34 billion in CWSRF assets to encourage use of state funds for state high-priority projects.
In 2001	933 projects funded by the Clean Water SRF initiated operations, including 400 projects providing secondary treatment, advanced treatment, CSO correction (treatment), and/or storm water treatment. Cumulatively, 7,452 SRF funded projects will have initiated operations since program inception
In 2001	Reduce point and nonpoint source loadings by managing the $30 billion in CWSRF assets to encourage use of state funds for state high-priority projects.
In 2000	Effectively implemented the Clean Water State Revolving Fund (CW SRF) program to ensure annual assistance of approximately $2 billion.
In 1999	30 states met "pace of the program" measures for loan issuance and pace of construction
In 1999	41 states and Puerto Rico conducted separate annual audits of their SRFs.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
CW SRF projects that have initiated operations. (cumulative)			7,452		8,800	SRF projects
States that are using integrated planning and priority systems to make CW SRF funding decisions. (cumulative)			16		20	States
States that meet or exceed "pace of the program" measures for loan issuance and construction (cumulative).	30	20	24			States
States and Puerto Rico that conduct separate annual audits of their CW SRFs	41	42	42			States
National CWSRF loans as a percentage of funds available, as measured by the ratio of cumulative loan agreement dollars to the cumulative funds available for loans. (base of 87.5% in 1999)					90 %	Ratio
EPA will report to Congress on the pace of the Clean Water State Revolving Fund Program.		1	1			Report

Baseline: The Agency's National Information Management System (NIMS) shows, as of July 1998, 39 states/territories were conducting separate annual audits of their SRFs and utilizing fund management principles. NIMS shows, as of June 1998, 25 states were meeting the "pace of the program" measures for

loan issuance, pace of construction, and use of repayments. As of September 1998, 8 states were using integrated planning and priority systems to make SFR funding decisions. NIMS shows 3,909 SRF projects initiated as of June 1998

Improving Wastewater Sanitation in Indian Country

In 2003	Increase protection of human health in Indian Country by providing adequate wastewater sanitation to more of the 71,028 homes in Indian Country with inadequate wastewater sanitation systems.
In 2001	Increased protection of human health in Indian Country by providing adequate wastewater sanitation to over 10,000 homes in Indian Country with inadequate wastewater sanitation systems.
In 2000	Reduced, by 6%, the number of homes in Indian Country with inadequate wastewater sanittion systems.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percent of homes in Indian Country whose residents are provided with adequate wastewater sanitation systems though funding from the CW SRF Tribal Set Aside Program. (cumulative)		6	14		26	% Homes

Baseline: Annual reporting established in FY 1998 by EPA and the Indian Health Service shows 71,028 homes in Indian Country without adequate treatment.

Wastewater Treatment Facility Compliance

In 2003	Enhance public health and environmental protection by securing the nation's critical wastewater infrastructure through support for homeland security preparedness, including vulnerability assessments, emergency operations planning, and system operator training.
In 2001	Protected human health and avoided increased point source loadings by permitting over 750 wastewater treatment systems to maintain permitted performance levels.
In 2000	872 Wastewater treatment facilities prevented from going into CWA non-compliance or assisted in moving toward compliance through assistance under CWA Section 104(g).

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Wastewater treatment facilities maintaining permitted performance levels through assistance under Section 104(g) of the CWA		872	776			Facilities

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Percent of the population served by, and the number of, large and medium-sized (10,001 and larger) Publicly Owned Treatment Works (POTWs) that have taken action for homeland security preparedness.	65%/5000	%pop/systems

Baseline: In 1998, 890 facilities were assisted to improve, maintain, or achieve compliance.

Wastewater Treatment

In 2003 Reduce human health risks and nonpoint source loadings from the approximately 11 million failing septic systems that pollute drinking water supplies, playgrounds and beaches, back up into homes and damage shellfish and other aquatic life.

In 2001 Reduced human health risks and nonpoint source loadings from the approximately 11 million failing septic systems that pollute drinking water supplies, playgrounds and beaches, back up into homes and damage shellfish and other aquatic life.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
States which adopt the Voluntary Management Guidelines for On-site Wastewater Treatment Systems.			0		4	States
CW SRF projects that have initiated operations. (cumulative)		6,519				SRF projects
Additional people who will receive the benefits of secondary or better treatment of wastewater	3.4	2.07				M People

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

Reducing Nonpoint Source Pollution

In 2003 Reduce nonpoint source sediment and nutrient loads to rivers and streams.

In 2001 Reduced nonpoint source sediment and nutrient loads to rivers and streams by ensuring that 5% of AFOs have developed Comprhensive Nutruient Management Plans (CNMPs).

913

In 2000 49 States upgraded their nonpoint source programs, to ensure that they are implementing dynamic and effective nonpoint source programs that are designed to achieve and maintain beneficial uses of water.

In 1999 In support of the Clean Water Action Plan, 11 additional states have upgraded their nonpoint source programs, to ensure that they are implementing dynamic and effective nonpoint source programs that are designed to achieve and maintain beneficial uses of water.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
AFOs for which Comprehensive Nutrient Management Plans (CNMPs) are developed. (cumulative)			5%			AFOs
Clean Water SRF loaned for projects to prevent polluted runoff.		6	6			% CW SRF
Number of coastal States and Territories with fully approved coastal nonpoint pollution control programs under the Coastal Zone Act Reauthorization Amendments of 1990. (cumulative)					29	States/Tribes
Clean Water SRF loaned for projects to prevent polluted runoff. (annual)					200	M Dollars
EPA approvals of state submitted upgraded nonpoint source programs (incorporating the 9 key elements outlined in national Nonpoint Source Program and Grants Guidance for FY97 and Future Years).	11	49				States

Baseline: As of September 1998, 24 states were funding nonpoint and estuary projects with their SRFs.

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GOAL 03: SAFE FOOD

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

OBJECTIVE 01: REDUCE RISKS FROM PESTICIDE RESIDUES IN FOOD

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

Decrease Risk from Agricultural Pesticides

In 2003	Decrease adverse risk from agricultural uses from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment, through ensuring that all registration action are timely and comply with standards mandated by law.
In 2001	The Agency registered 9 new chemicals, exceeding its target by 2, and 267 new chemicals, underperforming its target by 83.
In 2001	The registration of new agricultural pesticides, and reregistration of older agricultural pesticides, were done under the strict health-based standard of FQPA: "reasonable certainty of no harm." "Safer" pesticides are those that meet a stricter set of criteria.
In 2000	The Registration Program completed registrations for 9 new chemicals, 3069 amendments, 1106 me-toos, 427 new uses, 95 inerts, 458 special registrations, 452 tolerances, and 13 reduced risk chemicals/biopesticides.
In 1999	In FY 1999, EPA registered 19 additional reduced risk pesticides, including 13 biopesticides. EPA established 351 new pesticide food tolerances and acted on 681 proposed new pesticide uses, ensuring that all meet the new health safety standard of "reasonable certainty of no harm."

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Register safer chemicals and biopesticides	19	13	92		118	Regist. (Cum)
New Chemicals	7	9	53		67	Regist. (Cum)
New Uses	681	427	1896		2679	Actions (Cum)

Baseline: The baseline year is 1996; baseline quantities are 0. 1996 is the year FQPA was enacted with its new risk reduction, safety standard "reasonable certainty of no harm" for pesticides used on foods. Cumulative totals measured from baseline for safer chemicals, biopesticides, new chemicals, and new uses are displayed because this more clearly shows progress implementing FQPA than would a display of single-year results.

Reduce use of highly toxic pesticides

In 2003	Occurence of residues of carcinogenic and cholinesterase inhibiting neurotoxic pesticides on foods eaten by children will have decreased by 20 percent (cumulative) from their average 1994 to 1996 levels.
In 2001	Data will be available in March 2002.
In 2000	Due to regulatory actions and trends in usage, we are seeing a larger decrease (15%) in the use of carcinogenic or neurotoxic pesticides than expected. We anticipate that this trend will continue.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Reduction of detections on a core set of 19 foods eaten by children relative to detection levels for those foods reported in 1994-1996.		15%			20%	Reduced Detect.

Baseline: Percent occurrence of residues of FQPA priority pesticides (organophosphates and carbamates) on samples of children's foods in baseline years 94-96. Baseline percent is 33.5% of composite sample of children's foods: apples, apple juice, bananas, broccoli, carrots, celery, grapes, green beans (fresh, canned, frozen), lettuce, milk, oranges, peaches, potatoes, spinach, sweet corn (canned and frozen), sweet peas (canned and frozen), sweet potatoes, tomatoes, and wheat.

Reduced Risk Pesticides

In 2003	At least six percent of acre-treatments will use applications of reduced risk pesticides.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage of acre treatments with reduced risk pesticides					6%	Acre Treatments

Baseline: Baseline is 1998 acre-treatments: 3.6% of total acreage. Each year's total acre-treatments (all pesticides and reduced risk pesticides), reported by USDA's National Agricultural Statistical Survey (NASS), serve as the basis for computing the percentage of acre-treatments using reduced risk pesticides. Acre-treatments count the total number of pesticide treatments each acre receives each year.

OBJECTIVE 02: ELIMINATE USE ON FOOD OF PESTICIDES NOT MEETING STANDARDS

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

Reassess Pesticide Tolerances

In 2003	Assure that pesticides active ingredients registered prior to 1984 and the products that contain them are reviewed to assure adequate protection forhuman health and the environment.Also consider the unique exposure scenarios such as subsistence lifestyles of Native Americans in regulatory decisions
In 2003	By the end of 2003 EPA will reassess a cumulative 68% of the 9,721 pesticide tolerances required to be reassessed over ten years and complete reassessment of a cumualtive 75% of tolerances of special concern in protecting the health of children.
In 2001	EPA reassessed 40% of tolerances requiring reassessment under FQPA and issued a cumulative 72% of total REDs required, achieving both targets
In 2001	EPA reregistered 856 products, exceeding its target by 14%.
In 2000	We did not achieve our FY2000 target for tolerance reassessments due to the ongoing work to establish a science policy on cumulative risk. Although we missed our annual target, we are still on track to meet our statutory deadlines to reassess all tolerances.
In 1999	Tolerances reassessed by EPA through Sept. 30, 1999 totaled 35%, exceeding both our cumulative target and the statutory deadline of reassessing 33% of the existing tolerances by Aug. 1999.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Tolerance Reassessment	1445	121	40%		68%	Tolerances(Cum)
REDs	14	6	71.6%		83%	Decisions (Cum)
Product Reregistration	746	552	856		750	Actions
Tolerance reassessments for top 20 foods eaten by children			43.5%		75%	Tolerances(Cum)

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

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GOAL 04: PREVENTING POLLUTION AND REDUCING RISK IN COMMUNITIES, HOMES, WORKPLACES AND ECOSYSTEMS

Pollution prevention and risk management strategies aimed at eliminating, reducing, or minimizing emissions and contamination will result in cleane 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.

OBJECTIVE 01: REDUCE PUBLIC AND ECOSYSTEM RISK FROM PESTICIDES

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

Agriculture Partnership

In 2003	Focus partnership development that indicates a successful transition on minor use commodity groups which use high risk pesticides (organoposphates, carbamates and B2 carcinogens).
In 2003	With USDA, universities, state lead agencies, and other stakeholders, promote the research and adoption of reduced risk pest management strategies (pilot APG).
In 2001	EPA began implementation of 12 model agricultural pilot projects.
In 2000	Agricultural partnerships were initiated in four pilot regions: 4, 6, 9, and 10. OPPTS' goal was exceeded due to R10's initiating several mini grants for start up projects.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Model agricultural partnership pilot projects		15	12			Pilots
Successful transitions from high risk pesticides to effective alternative pest management practices					20-30	Transitions
Collaboration/outreach efforts					40	Efforts

Baseline: Under development

Pesticides in Groundwater

In 2003	Pesticides with high leaching and persistence potential managed to protect groundwater resources from contamination.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Pesticides with high leaching and persistence potential managed to protect groundwater					25	Pest. (Cum)

Baseline: Thirty-one pesticides have been identified as of March 2000. Baseline revised in FY02 to administrative measure that tracks regulatory decisions that reduce impact of high leaching and persistent pesticides on the environment because of concerns about NAWQA data; i.e., it may not be replicating survey due to funding and survey design which may use different survey sites from year to year. New PM targets will be established in FY02.

Reduce Risk to Endangered Species

In 2003 None of the top 15 species on the Office of Pesticide Programs/Fish and Wildlife Service/ U.S. Department of Agriculture (OPP/FWS/USDA) priority list of threatened or endangered species will be jeopardized by exposure to pesticides.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Species on priority list jeopardized					0	Species

Baseline: Top 15 species on OPP/FWS/USDA list for the year.

Reduce Wildlife Incidents and Mortalities

In 2003 Reduce by 20 percent from 1995 levels the number of incidents involving mortalities to terrestrial and aquatic wildlife caused by pesticides.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Reported incidents involving mortalities to birds and fish					20%	Reduction

Baseline: 80 reported bird incidents (involving 1150 estimated bird casualties); 65 reported fish incidents (involving 632,000 estimated fish casualties)

OBJECTIVE 02: REDUCE RISKS FROM LEAD AND OTHER TOXIC CHEMICALS

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

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Lead Regulatory Standards

In 2001 EPA finalized a rule that establishes standards regarding hazardous levels of lead in paint, dust and soil.

In 2000 A change in RCRA policy in August 2000 eliminated the need for issuance of this rule and accomplished its objectives.

In 1999 In FY 1999, EPA initiated two regulations necessary for a national program to address the hazards from lead-based paint The Lead Debris Disposal Rule was proposed in December 1998. Comment review and final rule development for the Lead Hazard Standards Rule continued in 1999.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Lead Debris Disposal Rule	Comments	Withdrawn				Rule
Lead Hazard Standards Rule - develop final	Comments	Final	1 final			Rule

Baseline:

Safe PCB Disposal

In 2003 Promote safe disposal of PCB-contaminated equipment and waste.

In 2001 Capacitor, Transformer and Bulk Waste data reported by industry on a calendar year basis and not available until September 2002. The Transfomer Reclassicifcation Rule was published on April 2, 2001.

In 2000 The data on FY 2000 PCB disposals will be available by May 1, 2002.

In 1999 Technical Corrections to the 1998 PCB Disposal Amendments was issued on 6/24/99. The PCB Transformer Reclassification Rule will be promulgated in FY 2000. EPA published a notice in the FR in October 1999 soliciting additional information to support the Non-Liquid PCB Use Authorization Rule.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Revisions to PCB Disposal Amendments, Non-liquid PCB use authorization, Transboundary movement of PCBs	1					Proposed
Safe Disposal of Transformers		Avail 5/02	Avail. 9/1/02		10000	Transformers
Safe Disposal of Capacitors		Avail. 5/02	Avail. 9/1/02		25000	Capacitors
Safe Disposal of Bulk Waste		Avail 5/02	Avail 9/1/02		660,000,000	Kg Bulk Waste
Develop Final Transformer Reclassification Rule		Delayed				Rule

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Baseline: Baseline for Capacitors: 1.85 million units; Transformers 2.20 million units; baseline for bulk waste disposal is based on annual disposal of PCB bulk waste from 1990-1995.

Lead Certification and Training of Lead Abatement

In 2003 Reduce lead exposure in housing units and in the deleading of bridges and structures.

In 2001 EPA did not finish this rule.

In 2001 More than 2,000 individuals were certified as lead abatement professionals. This number was estimated from the monthly average of incoming Certification Applications. An improved tracking mechanism is being negotiated with a contractor for future years.

In 2000 Additional legal requirements for lead-based paint abatement certification and training for the tribes has delayed development of two tribal programs.

In 2000 The lead rules for lead paint abatement/renovation and remodeling and building/superstructures were not met due to the lengthy SBREFA process and FTE cuts

In 1999 Development continued training, accreditation and certification rules: 1) renovation and remodeling activities and 2) deleading on bridges and structures. When these rules are promulgated, a full set of national standards for safe, effective reduction of lead-based paint hazards will be place.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Develop state programs for the training, accreditation and certification of lead-based paint abatement professionals.	28	36				States
Lead Renovation Information Rule	Final					Rule
A Federal training, accreditation and certification program will be established and administered in states which choose not to seek approval from EPA to administer.	22	19				Federal
Develop proposed rules for lead paint abatement/ renovat. & remod. and bldg./super. rule	2 Proposed	Delayed				Rules
Develop tribal programs for training, accreditation and certification of lead-based paint abatement professionals.		2				Trib.Prog (cum)
Evaluate results from pilot test of indicators and modify for implementation nationwide.						Analysis
Building and Superstructure Rule					1 Proposed	Rule

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Certified individuals only in states with federally administered program	>2,000		Certified
Certified nationally (federally-administered and state-administered program)		5000	Certified
Number of Abatements		pilot (TBD)	Notifications
Pilot Regional effort to monitor reduction in lead exposures		3	Regions
Renovation and Remodeling Rule	incomplete	1 Proposed	Rule
Administer data collection grants to Tribes to determine Tribal lead exposure		15	Grants

Baseline: Baseline will be established in 2001. (Note: 2003 goal of 5000 assumed that both EPA and state certifications would be counted. We have been unable to confirm when/if we will get state data, so are now limiting this to EPA data.)

Rule development was initiated in 1998; no consistent standard for abating lead paint for renovation or buildings/superstructures existed prior to Title X.

OBJECTIVE 03: MANAGE NEW CHEMICAL INTRODUCTION AND SCREEN EXISTING CHEMICALS FOR RISK

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

New Chemicals and Microorganisms Review

In 2003	Of the approx. 1,800 applic. for new chem. and microorganisms submitted by industry, ensure those marketed are safe for humans and the envir. Increase proportion of commer. chem. that have undergone PMN review to signify they are properly managed and may be potential green altern. to exist. chem.
In 2001	EPA reviewed 1,770 Premanufacturing Notices. By the end of 2001, 21 percent of all chemicals in commerce had been assessed for risks.
In 2000	All new chemical pre-manufacturing notification submissions were reviewed within the required timeframe.
In 1999	EPA used TSCA authorities to review 1,717 premanufacture notices (PMNs) and exemptions. EPA took control actions on 20 of the 31 notices involving PBTs. EPA received 172 toxicity tests on over 103 chemicals.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
TSCA Pre-Manufacture Notice Reviews	1717	1838	1770		1800	Notices
Notice of Commencements			21.0		22.3%	NOCs (Cum)

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

Testing of Chemicals in Commerce for Endocrine Dis

In 2003 Through the priority setting process, narrow the universe of 87,000 chemicals to identify those that are potential endocrine disruptors.

In 2001 The two screening assays were not completed.

In 2000 In addition to the 2 planned endocrine disruptor screening assays, EPA started the 2-generation mammalian assays.

In 1999 The Agency completed a number of key activities in FY 1999 including the High-Throughput Pre-Screening (HTPS) feasibility demonstration study, initiated the development of a Priority Setting Database, and started work on standardization of several screens and tests for use in the EDSP.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Develop program to screen 5,000 chemicals for endocrine disruption potential	Developed					Program
Screening Assays Completed		4				Screening assay
Federal Register Notice on the proposed first list of chemicals for Tier 1 Screening.					1	FR Notice

Baseline: The non-prioritized universe of chemicals that needs to be considered for prioritization includes: pesticide active ingredients, pesticide inert ingredients, chemicals on the TSCA Inventory, environmental contaminiants, food additives, pharmaceuticals, cosmetics, nutritional supplements, and representative mixtures. "Priority-setting" refers to the determination of priorites for entry into Tier 1 Screening.

Chemical Right-to-Know Initiative

In 2003 Provide information and analytical tools to the public for assessing the risks posed by toxic chemicals.

In 2001 Data was obtained from test plans submitted by industry for 724 chemicals already in commerce.

In 2000	Industry's response to the HPV Challenge was greater than expected. Industry provided EPA with significantly more test data and voluntary agreements on high production volume chemicals than was expected.
In 2000	The goal of providing information and analytical tools to the public was not met due to a shift to other priorities. The community partnership initiating the second community analysis has made slow progress.
In 1999	EPA challenged industry to take responsibility for collecting data on the effects of the chemicals they manufacture and over 200 companies and consortia had voluntarily committed to make public, before the end of 2005, basic hazard data on over 1,150 of the approx. 2,800 HPV chemicals.
In 1999	The TRI Persistent Bioaccumulative Toxics rule was proposed. The final rule was published in the Federal Register in October 1999 (FY 2000).

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
TSCA Chemical Inventory Update Rule	Proposed					Rule
Addition of PBTs to TRI rulemaking	Final					Rule
Under chemical right-to-know activities, secure voluntary agreements from chemical manufacturers to test high production volume chemicals		2155				Chemicals
Through chemical testing program, obtain test data for high production volume chemicals on master testing list.		181	724			Chemicals
Provide current national risk screening information to the public		0			1	Tools
Completion of community risk identification analyses		1			2	Analyses
Complete EPA-HQ risk-based priority setting exercise					5	Analyses
Complete EPA risk-based regional office priority-setting system					5	Analyses
Complete state risk-based priority setting exercises					6	Exercises
Expand use of risk screening environmental indicators tools to other countries that adminster pollutant release and transfer registries					1	Country
Make screening quality health and environmental effects data publicly available for 2,800 HPV chemicals					16%	Data (Cum)
Number of Peer Reviews Conducted with Industry					2	Reviews
Number of initiated/completed risk assessments for chemicals					4	Actions

Number of submissions using exposure assessment methods, databases, and models.	80%	Submiss. (cum)
Number of users of exposure assessment methods, databases, and models	500	Users
P2 and Risk Management Guidance Documents	1	Docs./Manual
Training Workshops	3	Workshops
Establish state toxics management programs	1	Pilot Programs

Baseline: Release of national risk screening information first occurred in FY99. First community risk identification analysis were completed in FY00. First National, Regional, and State level risk-based priority setting excercise will be completed in FY02. First expanded use of risk screening tool by other countries will occur in FY02. As data is collected it is available on http://www.epa.gov/chemtrk.

Expand Local Information on Toxic Substances

In 2001

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Provide current national risk screening information to the public			1			Tools
Completion of community risk identification analyses			2			Analyses

Baseline: Release of national risk screening information first occurred in FY 1999. First community risk identification analyses were completed in FY 2000. First National, Regional, and State level risk-based priority setting exercises will be completed in FY 2002. First expanded use of risk screening tool by other countries will occur in FY 2002.

Risk Screening Environmental Indicators

In 2003 Reduce by 3.0% cum. hazard-based score for chronic human health calculated for releases and transfers of toxic chemicals reported to TRI from the level calculated for the preceding year, after adjusting for changes in production indices for the manufacturing, mining, and utilities sectors.

In 2003 Reduce by 4.0% cum. the risk-related score assoc. with air & water release pathways for chronic human hlth calc for releases & transfers of toxic chem. rptd to TRI from the level calc. for the preceding year,after adjusting for chgs in production indices for the manuf,mining & utilities sectors

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Reduction in the year 2002 production-adjusted RSEI hazard-based score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).					3.0%	Index
Reduction in the year 2002 production-adjusted RSEI risk-based score of releases and transfers of toxic chemicals reported to TRI from the level calculated for 2001 (reported in 2004).					4.0%	Index

Baseline: This production-adjusted APG measure is based upon the Risk Screening Environmental Indicators (RSEI) chronic human health risk-related score which is calculated by weighting estimated surrogate doses associated with TRI releases by facilities. The data for 1995 are used as the baseline for this measure.

PBT Profiler

In 2003 Provide industry with user-friendly computerized tools that allow new chemical product alternatives to be evaluated at early stages of design process

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of users of the PBT Profiler					100	Users
Number of Chemicals Profiled					1000	Chemicals
Number of Companies Participating in Sustainable Futures					25	Participants
Number of Self-Audited New Chemical Product Alternatives					100	Alternatives

Baseline: In FY 2002 the Agency made powerful risk screening software (the P2 framework) broadly available to chemical industry, including providing regulatory relief as an incentive to drive chemical risk screening and P2 outcomes. In FY 2003, the Agency will audit Premanufacture submissions to determine the number of companies participating and the total number of self-audited product alternatives.

Protect from Acute Exposure to Extremely Haz. Chem

In 2003 Establish short-term exposure limits for a wide range of acutely toxic substances that are protective of general public, including children, infants, the infirmed, and the elderly through the Acute Exposure Guideline Levels (AEGL) Program

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Chemicals Addressed by AEGL Program					33	Chemicals
Number of AEGL values generated that will protect workers and general public					495	Values

Baseline: Baseline is 2002; calculation methodology by addition of AEGL values (10 minute, 30 minute, 1 hour, 4 hour, and 24 hour exposure periods) and numbers of chemicals addressed.

Research

Research on Commercial Chemicals and Microorganism

In 2003 Provide a strategic framework for developing an integrated suite of tools that will enhance OPPTS procedures for assessing the risks to human health and ecological systems associated with commercial chemicals, microorganisms, and genetically modified organisms.

In 2001 EPA produced guidance on the use of structure activity relationships, as well as data on exposure of farm applicators to agricultural pesticides to improve the characterization of health risks and reduce community exposures to environmental chemical stressors.

In 2000 EPA developed a model to assess the susceptibility of the developing immune system to environmental contaminants, yielding a product important for evaluating the impact of environmental stressors on human health and ecological endpoints.

In 1999 Completed summary of in vitro methods used to sort chemicals acting through one-electron reactive mode of toxic action, which will provide the Agency with an additional approach to the classification of potential ecological hazard posed by new and existing chemicals.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Peer reviewed publication on the in vitro screening methods for one-electron reactions.	1 Publication					
Develop an animal model to assess susceptibility of the developing immune system to environmental contaminants.		1				model
Guidance in the use of Structure Activity Relationships (SAR) computer technologies.			1			guidance
Use QSAR models and animal test methods to meet regulatory objectives associated with tiered human health and ecological risk assessments of commercial chemicals, microorganisms, and GMOs					09/30/2003	methods

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Baseline: At present, standard guidelines for test methods and risk assessment methodologies to evaluate the potential risks of environmental stressors to human health and ecological systems are limited to certain endpoints and are generally non-probabilistic in nature. Improved test methods and risk assessment tools will be developed to more accurately predict and fully characterize human health and ecological risks. Improved risk management tools will also be developed that will better identify and reduce environmental exposures to human health and ecosystems.

OBJECTIVE 04: ENSURE HEALTHIER INDOOR AIR.

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

Healthier Residential Indoor Air

In 2003 834,400 additional people will be living in healthier residential indoor environments.

In 2001 An additional 890,000 additional people are living in healthier residential indoor environments.

In 2000 1,032,000 additional people are living in healthier residential indoor environments.

In 1999 1,322,000 additional people are living in healthier residential indoor environments.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
People Living in Healthier Indoor Air	1,322,000	1,032,000	890,000		834,400	People

Baseline 1. By 2003, increase the number of people living in homes built with radon resistant features to 3,635,000 from 600,000 in 1994. (cumulative) 2. By 2003, decrease the number of children exposed to ETS from 19,500,000 in 1994 to 16,889,000. (cumulative) 3. By 2003, increase the number of people living in radon-mitigated homes to 1,625,700 from 780,000 from 1994. (cumulative) 4. By 2003, increase by 122,400 the number of people with asthma and their caregivers who are educated about indoor air asthma triggers.

Healthier Indoor Air in Schools

In 2003 1,050,000 students, faculty and staff will experience improved indoor air quality in their schools.

In 2001 An additional 1,930,000 students, faculty and staff are experiencing improved indoor air quality in their schools.

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

In 1999 1,050,000 students, faculty, and staff experienced improved indoor air quality in their schools.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Students/Staff Experiencing Improved IAQ in Schools	1,050,000	2,580,000	1,930,000		1,050,000	Students/Staff

Baseline: The nation has approximately 110,000 schools with an average of 525 students, faculty and staff occupying them for a total baseline population of 58,000,000. The IAQ "Tools for Schools" Guidance implementation began in 1997. For FY 2003, the program projects an additional 2,000 schools will implement the guidance and seeks to obtain implementation commitments from 5 of the 50 largest school districts in the U.S. with an average of 140,000 per district. (Additional, not cumulative since there is not an established baseline for good IAQ practices in schools)

OBJECTIVE 05: FACILITATE PREVENTION, REDUCTION AND RECYCLING OF PBTS AND TOXIC CHEMICALS

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

Green Chemistry Challenge Awards

In 2003 Continue to stimulate development of new safe ("green") chemicals and safe chemical processes through public recognition for outstanding achievements in this field.

In 2001 The program received information on a total of 75 processes/products.

In 2000 EPA exceeded its target of 50 Green Chemistry Challenge Award nominations.

In 1999 EPA received 136 nominations in five categories, more than two and a half times its target. The efforts upon which these nominations were based produced reductions in use and emmissions of hazardous substances, savings in capital investments, reduced worker exposure, and improved product yields.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Green Chemistry Challenge Award	134	74				Applications
Alternative feed stocks, processes, or safer products identified through Green Chemistry Challenge Award			75		160	Prod/proc (cum)

Baseline: Baseline is zero in FY 2000.

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Toxic Release Inventory (TRI) Pollutants Released

In 2003	The quantity of Toxic Release Inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2003, (normalized for changes in industrial production) will be reduced by 200 million pounds, or 2%, from 2002. This data will be reported in 2005.
In 2001	No conclusions can be drawn regarding changes in TRI Non-recycled wastes from calendar year 2000 to calendar year 2001 without data.
In 2000	EPA exceeded its target of a reduction of 200 million pounds of TRI pollutants released.
In 2000	Projections for Form Rs submitted are based on past year submissions.
In 1999	Total releases of toxic chemicals decreased by 38.8million pounds from 1995 thru 1997. The 1997 TRI data, however, reflect a continued increase in production related wastes. This increase is accompanied by a continued increase in the use of pollution prevention practices by industry.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Form Rs with Source Reduction activities (cumulative)		134,000				Facilities
Reduction of TRI non-recycled waste (normalized)	1.1B lbs incr.	405 Million	not available		200 Million	lbs

Baseline: This APG measures changes in TRI Non-Recycled Wastes. TRI data are reported to EPA by facilities by July 02, and compiled and reported publically by EPA in Spring 03. EPA will do an analysis to determine a new target.

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Managing PBT Chemicals

In 2003	Initiate further actions pursuant to PBT Strategy and Level I PBT National Action Plans including a plan to address unique environmental health threats to Tribes and special populations.
In 2001	15 new PBT prevention / reduction projects initiated through regional offices in 2001. The list of additional priority PBTs was not published.
In 2000	Review of available information during examination of potential Level II PBT chemicals led to a broader list than originally expected.
In 1999	EPA published a draft agency-wide PBT Strategy and draft Mercury Action Plan. EPA initiated ten new projects with primary focus on reducing mercury use and emissions. EPA also completed seven draft national action plans, which address 11 of the remaining priority PBTs.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Initiate risk reduction actions in accordance with National Action Plan	11					Chemicals
Integrate level II chemicals into National Action Plans.		19				Chemicals

Number of prevention and reduction Regional projects initiated.	12	25	45	Grants (Cum)
Publish final list of additional priority PBTs.		0		List
Hospital Mercury Project			100	Participants
Tribal PBT Actions			4	Grants

Baseline: Level II chemicals: For PBT risk reduction projects, the baseline is zero projects in FY 1999 Final List of Priority PBTs: The baseline for hospital mercury project is under development. The baseline for number of new multiple-PBT strategies completed is zero in 2001.

Safer Alternative Cleaning Technologies

In 2003 Expand the use of cleaner technologies in priority industries, including reduction in the use of perchloroethylene from 1997 levels.

In 2001 EPA continued to work with industry on reducing the use of the highly toxic chemical perchloroethylene in the dry cleaning industry.

In 2001 The market share for cleaner inks is 6 percent. The market share for cleaner adhesives increased to 65%. In FY2001, EPA established partnerships with 8 detergent formulation industry entities, including 15 formulations.

In 2000 Supporting expanded P2 practices in a the garment and textile care industry , data for Jan.-Oct. 2000 indicates 348 wetcleaning machine sales. This is 36% over the 1998 base year. Projections based on the prior eight months were used for Nov. and Dec.

In 2000 The technical assessment of traditional and alternative ink formulations was delayed though completed in FY2000. Outreach activities began only after the assessment was complete. We expect to see the results of this work in FY 2001.

In 1999 Overall, the DfE program has formed partnerships with industry to reduce million of pounds of hazardous chemicals, reduce worker exposure, increase awareness of safer practices, and develop environmentally preferred products. Dry cleaners reduced perc use by 11 million pounds in 1998.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage increase in the use of alternative cleaning technologies by garment care industry.	10%	36%				Use-cumulative
For inks, track size of flexographic ink industry and market share ($ and lbs) of cleaner inks.		0%	6%		15% (cum)	Market share
For adhesives, track size of cleaner adhesive industry market share.			65%		70% (cum)	Market Share
For eco-friendly detergents, track the number of laundry detergent formulator industry partners.			18		12	Partners (cum)

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Perchloroethylene reduction	not available	40%	Use Reduct cum	

Baseline: In 1997, 83 million pounds perchloroethylene (perc) used; in 1998, 72 million pounds of perc used; in 1999, 63 million pounds of perc used.

Eco-friendly detergents baseline is 1997: 0 partners and 0 detergents. The adhesives baseline is 1997 which reflects the beginning of tracking market share -- the measure is the increase in market share from the baseline. Baseline for flexographic inks measure is 1998 which reflects the beginning of tracking market share.

Reducing PBTs in Hazardous Waste Streams

In 2003 Reduce waste minimization priority list chemicals in hazardous waste streams by 43% to 86 million pounds by expanding the use of state and industry partnerships and Regional pilots

In 2001 A draft trends report that shows changes from 1991 to 2000 was prepared in FY 2001 and is currently undergoing intergovernmental review.

In 2000 Goal not met. Due to an increase in scope of voluntary chemicals the final list on RCRA persistent, bio-accumulative and toxic (PBT) chemicals was not issued. EPA anticipates that the expanded list will be issued by September 2001.

In 1999 The schedule for finalizing the PBT List was delayed due to changes in the scope of effort. Based on public comments, EPA decided to expand the list to include other multi-media data.The schedule has been extended to include peer review of underlying data. EPA anticipates final publication in 2/00.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Issue final guidance on PBT Identification	0					document
Issue final PBT list.		0				list
Prepare a trends report that shows Toxic Release Inventory changes from 1991 to 1998.			1			report
Reduction in generation of priority list chemicals from 1991 levels.					43	percent

Baseline: 1991 Toxic Release Inventory data will be used to determine reductions.

Municipal Solid Waste Source Reduction

In 2003 Divert an additional 1% (for a cumulative total of 32% or 74 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day.

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In 2001 FY 2001 data is not available for the diversion of municipal solid waste from land filling and combustion or maintaining per capita generation of RCRA municipal solid waste. Analysis of FY 2001 data is anticipated by September 2003.

In 2000 FY 2000 data is not available for the diversion of municipal solid waste from land filling and combustion (goal was an additional 1%) or maintaining per capita generation of RCRA municipal solid waste to 4.3 pounds per day. Analysis of FY 1999 data is anticipated by September 2001.

In 1999 In FY 1999, 28% or 64 million tons of municipal solid waste was diverted from land filling and combustion, and the per capita generation was raised to 4.6 pounds per day. Increased per capita generation is tied to robust economic expansion.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Millions of tons of municipal solid waste diverted.	64	Not Available	not available		74	million tons
Daily per capita generation of municipal solid waste.	4.6	Not Available	not available		4.5	lbs. MSW

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

OBJECTIVE 06: ASSESS CONDITIONS IN INDIAN COUNTRY

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

Tribal Environmental Baseline/Environmental Priori

In 2003 In 2003, AIEO will evaluate non-Federal sources of environmental data pertaining to conditions in Indian Country to enrich the Tribal Baseline Assessment Project.

In 2001 Baseline environmental assessments were collected for 207 Tribes.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Tribal environmental baseline information collected	10	16				% Baseline
Tribes with Tribal/EPA environmental agreements or identified environmental priorities	46	4				Tribes
Environmental assessments for Tribes. (cumulative)			207			Tribes, etc.
Non-federal sources of environmental data pertaining to conditions in Indian Country.					20	Data sources

Baseline: There are 572 tribal entities that are eligible for GAP program funding. These entities are the ones for which environmental assessments of their lands will be conducted

934

GOAL 05: BETTER WASTE MANAGEMENT, RESTORATION OF CONTAMINATED WASTE SITES, AND EMERGENCY RESPONSE

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

OBJECTIVE 01: CONTROL RISKS FROM CONTAMINATED SITES AND RESPOND TO EMERGENCIES

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

Leaking Underground Storage Tank Cleanups

In 2003 EPA and its partners will complete 22,500 Leaking Underground Storage Tank (LUST) cleanups for a cumulative total of approximately 313,300 cleanups since 1987.

In 2001 19,074 LUST cleanups were completed in FY 2001.

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

In 1999 EPA completed 25,678 LUST cleanups.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
LUST cleanups completed.	25,678	20,834	19,074		22,500	cleanups

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

Superfund Removal Response Actions

In 2003 Conduct 275 Superfund removal response actions for a cumulative total of 7,138 removal response actions since 1982.

In 2001 EPA conduced 302 removal response actions, for a cumulative total of 6,588 over the life of the program.

In 2000 EPA exceeded its target by conducting 357 removal response actions, for a cumulative total of 6,286 over the life of the program.

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In 1999 EPA exceeded the target by conducting 356 removal response actions.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Removal response actions.	356	375	302		275	removals
Amount of liquid based waste removed.					no target	gallons
Amount of solid waste removed					no target	cubic yards

Baseline: EPA completed a total of 6,286 removal response actions from 1982 through 2000

Superfund Cleanups

In 2003 EPA and its partners will complete 40 Superfund cleanups (construction completions).

In 2001 EPA completed construction at 47sites, achieving 804 construction completions over the life of the program.

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

In 1999 EPA met the target of 85 construction completions.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Construction completions.	85	87	47		40	completions

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

Superfund Cost Recovery

In 2003 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

In 2000 Addressed cost recovery at 98.5% of NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.

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

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Refer to DOJ, settle, or write off 100% of Statute of Limitations (SOLs) cases for SF sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.	99%	98.5	97.8		100	Percent

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

Superfund Potentially Responsible Party Participat

In 2003 Maximize all aspects of PRP particicipation which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process.

In 2001

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Section 106 Civil Actions	33					Agreements
Ensure fairness by making Orphan Share Offers at 100% of all eligible settlement negotiations for response work.	100%	100	100			Percent
Provide finality for small contributors by entering into De Minimis settlements and report the number of settlers.	38	18	15			Settlements
Remedial Administrative Orders	17					Orders
Administrative and judicial actions		100				actions
PRPs conduct 70% of the work at new construction starts			67.3		70	Percent

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

RCRA Corrective Action

In 2003 257 (for a cumulative total of 1,252 or 73%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 1,054 or 61%) of high priority RCRA facilities will have groundwater releases controlled.

In 2001 EPA exceeded its RCRA corrective action goal for human exposures controlled with an additional 179 facilities, and came close to achieving its goal for groundwater releases controlled with an additional 154 facilities.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
High priority RCRA facilities with human exposures to toxins controlled.	162	191	179		257	facilities
High priority RCRA facilities with toxic releases to groundwater controlled.	188	168	154		172	facilities

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

Brownfield Site Assessment Grants

In 2003 EPA will provide additional site assessment funding to 74 new sites, and to 52 existing sites, resulting in a cumulative total of 3,350 properties assessed, the generation of 21,300 jobs, and the leveraging of $5.0 billion in cleanup and redevelopment funds since 1995.

In 2001 FY 2001 third quarter data shows cumulative totals of 2,594 site assessments, generation of 17,307 jobs and leveraging of $3.7 billion in cleanup and redevelopment funds.

In 2000 Although final data is not expected until April 2001, third quarter data shows that the goal was exceeded. Third quarter results show cumulative totals of 2,024 site assessments, generation of 7,446 jobs and leveraging of $2.8 billion in cleanup and redevelopment funds.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Cumulative leveraging of cleanup and redevelopment funds.		not available	$3.7 B		$5.0 B	funds leveraged

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Cumulative jobs generated.		not available	17,307	21,300	jobs generated
Cumulative site assessments.		not available	2,594	3,350	assessments
Cooperative agreements to support Brownfields assessment pilots.	80				agreements

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

Brownfield Community Support

In 2003 EPA will provide funding for 30 communities to capitalize revolving loan funds for a cumulative total of 182, provide funding for 10 job training pilots for a cumulative total of 66 and 70% of graduates placed in jobs, and support 28 existing Showcase Communities.

In 2001 46 communities capitalized 23 new and append 2 existing revolving loan funds. EPA awarded 12 additional showcase community designations, supporting a total of 28 showcase communities. Additionally, EPA awarded 9 new job training pilots.

In 2000 EPA met its goal, benefitting a total of 61 communities through 37 agreements to capitalize revolving loan funds Additionally, EPA was successful in supporting 16 showcase communities and 16 job training pilots

In 1999 EPA met its target by supporting 16 existing showcase communities, and provided funding for 68 communities to capitalize brownfields cleanup revolving loan funds resulting in the award of 45 cooperative agreements.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Showcase communities.	16	16	28			communities
Communities served by cooperative agreements to capitalize revolving loan funds.	45	37	46			agreements
Job training pilots		16	9			pilots
Cumulative communities served by cooperative agreements to capitalize revolving loan funds.					182	communities
Cumulative job training pilots.					66	pilots
Cumulative showcase communities.					28	communities
Percentage of trainees placed.					70	percent

Baseline: By the end of 2000, EPA signed 104 agreements for capitalization of revolving loan funds, awarded 37 job training pilots, and provided continued support to 16 showcase communities.

Superfund Intermediate Cleanup Indicators

In 2003 EPA will increase the number of Superfund hazardous waste sites with human exposures and migration of contaminated groundwater under control.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Superfund hazardous waste sites with human exposures controlled.					10	sites
Superfund hazardous waste sites with groundwater migration controlled.					10	sites

Baseline: In FY 2001, EPA established a preliminary baseline of 1450 final and deleted NPL sites to monitor for human exposures under control. 1126 (78%) of these 1450 sites have human exposures under control. In FY 2001, EPA established a preliminary baseline of 1204 final and deleted NPL sites to monitor for migration of contaminated groundwater under control. 745 (61%) of these 1204 sites have contaminated groundwater migration under control.

Tribal Cleanup Assistance

In 2003 Complete 45 Leaking Underground Storage Tank (LUST) cleanups in Indian Country for a cumulative total of 617 cleanups since 1987

In 2003 EPA will continue to emphasize increasing the number of Indian tribes participating in the Superfund program, as expressed through the number of tribes supported by Superfund cooperative agreements with tribes and intertribal consortia.

In 2001 30 LUST cleanups were completed in Indian Country in FY 2001.

In 2001 FY 2001 accomplishments in Indian Country include 11 site assessments, support to 78 tribes through 27 cooperative agreements, provision of $3.8M for capacity building, and tribal leadership or support in responding to 26% of Superfund sites impacting Indian Country.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
LUST cleanups in Indian Country.			30		45	cleanups
Site assessments (PA/SI) conducted in Indian country.			11		no target	assements
The number of tribes supported by cooperative agreements with tribes/intertribal consortia.			78		no target	agreements
Funding provided for building tribal capacity.			$3.8M		no target	funding

940

Percentage of Superfund sites impacting Indian country where a tribe is involved as either the lead or support agency.			26		no target	involvement

Baseline: EPA completed a total of 532 LUST cleanups in Indian Country from 1987 through 2001. The baseline for Superfund activities is currently under development.

Homeland Security

In 2003 EPA will complete the remaining 27 critical facility vulnerability assessments, priortize the risks associated with each facility, and begin mitigation.

In 2003 EPA will improve its overall homeland security readiness capability by 20% by performing enhanced training and exercises and providing state-of-the-art equipment. Percentage improvement will be determined by an annual readiness survey and inspections.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage improvement in homeland security readiness.					20	percent
Percentage of LEPCs that have incorporated homeland security prevention and planning into community contingency plans.					no target	percent
Percentage of states that have incorporated homeland security planning into state response systems.					no target	percent

Baseline: Based on FY 2002 performance, baseline is zero for number of critical Agency facilities that have had vulnerability assessments.

Homeland Security

In 2003 EPA will complete the remaining 27 critical facility vulnerability assessments, priortize the risks associated with each facility, and begin mitigation.

In 2003 EPA will improve its overall homeland security readiness capability by 20% by performing enhanced training and exercises and providing state-of-the-art equipment. Percentage improvement will be determined by an annual readiness survey and inspections.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of vulnerability assessments performed.					27	Assessments

Baseline: Based on FY 2002 performance, baseline is zero for number of critical Agency facilities that have had vulnerability assessments.

941

Research

Scientifically Defensible Decisions for Site Clean

In 2003	To ensure cost-effective and technically sound site clean-up, deliver state-of-the-art guidance and methods to EPA and stakeholders for risk management of fuel oxygenates; organic and inorganic contamination of sediments, ground water and/or soils; and oil spills.
In 2001	EPA provided technical information to support scientifically defensible and cost-effective decisions for clean-up of complex sites, hard-to-treat wastes, mining, oil spills near shorelines, and Brownfields to reduce risk to human health and the environment.
In 2000	The MTBE case studies summary report was delayed to include more than the original four sites. The SITE report was sent to OMB in FY 2000, but the time required for approval delayed its arrival in Congress. The dermal exposure route report was delayed until 12/00 to allow for completing peer review.
In 1999	Completed: 1) Statistical Distribution for Selected Exposure Factors; 2) report and software on modeling of bioavailability of cadmium at haz. waste sites; 3) issue paper on pesticide degradation in haz. waste sites; 4) report on software and database for pilot project to enhance MIXTOX database.
In 1999	Produced the annual Superfund Innovative Technology and Evaluation (SITE) Program report, and completed six (6) innovative technology reports.
In 1999	Produced: 1) manual of practice for the Horizontal Lasagna Process; 2) research data from bench-scale studies of leachate application to liner materials; and 3) final cover guidance revision on an EPA report entitled, "Alternative Cover Assessment Project Phase I Report."

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Environmental Research Brief on permeable reactive barrier of ground water contaminated with chromium and chlorinated solvents	1 report					
Using data from the Exposure Factors Handbook, develop peer-reviewed statistical distributions for selected exposure factors.	30-SEP-1999					
Interim report on monitored natural attenuation in sediments			1			document
Summary Report of Case Studies of Natural Attenuation of MTBE, a fuel additive, at Geographically Diverse Locations		0				report
Progress report on Field Demonstration of Chemically-Enhanced Subsurface Dense, Non-Aqueous Phase Liquid Extraction Technologies			1			report
Superfund Innovative Technology Evaluation (SITE) Program Report to Congress.		18-Jan-2001				report

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A report summarizing the key research findings methods, models, and factors relating to evaluating the risks from the dermal route of exposure.		31-Dec-2000			report
Review the 20 most common Superfund soil contaminants and develop eco-toxicity soil screening levels for wildlife and soil biota for chemicals where there is sufficient data.		30-Sep-2000			values
Delivery of the Annual SITE Program Report to Congress	30-Nov-1999				
Publish a technical Resource Document on the bioremediation of oil spills on marine shorelines. Provide oil spill response teams with a tool to assess appropriate applications of bioremediation.			1		document
Deliver the Annual SITE Program Report to Congress.			0		report
Annual SITE Program report to Congress detailing 4-6 innovative approaches, their cost savings and future direction; reports summarizing pilot scale evaluation of in-situ remedies for solvents.				1	report
Report: Permeable reactive barriers for ground water remediation; Incorporating the results of long-term performance studies in remedy selection for contaminated sites.				1	report

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Baseline: Deliver state-of-the -art guidance and methods to EPA and other stakeholders for risk management of fuel oxygenates; organic and inorganic contamination of sediments, ground water and/or soils; and oil spills to ensure cost-effective and technically sound site clean-up. Baseline: There are a number of contaminants and/or media at Superfund, Leaking Underground Storage Tank (LUST) sites that are difficult to clean up. Methyl tert-Butyl Ether (MTBE), a fuel oxygenate found increasingly in US ground water/drinking water, requires clean up to low (ppb) levels but clean-up is expensive because of its chemical, physical and biological properties. Polynuclear aromatic hydrocarbons (PAH) are found at wood preserver sites and gas manufacturing plants, contain carcinogenic components and are difficult to cost-effectively clean up due to their high molecular weight. Arsenic (As) in ground water requires clean up to low levels due to its impacts on humans and ecological systems. As treatment systems which perform for long periods of time are needed We also need to understand the reasons why ground water As concentrations may naturally reduce over time. Bulk shipment/storage of non-petroleum oils (e.g. vegetable oils) can result in spills/leaks that have significant impacts on fresh water and marine environments. Inexpensive techniques are needed to clean up these spills without doing further harm to the environment. Research involving pilot and full scale treatment testing/demonstrations is particularly important when addressing these research needs because such research will lead to near-term options for effective, reasonable-cost clean-ups

OBJECTIVE 02: REGULATE FACILITIES TO PREVENT RELEASES

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

UST Compliance

In 2003 EPA and its state and tribal partners will ensure that 80% of UST facilities will be in significant operational compliance with leak detection requirements, and 85% of UST facilities will be in significant operational compliance with spill, overfill and corrosion protection regulations.

In 2001 The Agency now tracks the number of UST facilities in significant operational compliance with requirements, as opposed to the number of UST systems equipped to meet the requirements. For this reason, data on these two measures is not available and will not be available in the future.

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage of USTs in compliance with the 1998 deadline requirements.		86%	not available			compliance
Percentage of USTs in compliance with the leak detection requirements.			not available			compliance
Percentage of UST facilities in significant operational compliance with leak detection requirements.					80	percent
Percentage of UST facilities in significant operational compliance with spill, overfill and corrosion protection regulations.					85	percent

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

Emergency Planning

In 2003 300 audits will be completed on RMP plans to determine completeness and accuracy, and 8 additional states (for a cumulative total of 25) will be implementing accident prevention programs.

In 2001 EPA met its goal, with 85% of facilities submitting RMPs, 5 additional states implementing Accident Prevention Programs, and 438 audits completed to determine RMP completeness and accuracy.

0444

In 2000 EPA met its goal by documenting compliance with RMP requirements at 75% of the covered facilities, facilitating 3 additional states in implementation of the RMP program and conducting 266 RMP facility audits

In 1999 In FY99, the electronic system for collecting and establishing baseline data on RMP facilities was completed. The total number of facilities which have submitted RMPs is 14,405. Additionally, 2 States are implementing a prevention program.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage of facilities which have submitted RMPs.		75%	85			facilities
RMP audits completed.		266	438		300	audits
Number of states implementing accident prevention programs.	2	3	5		8	states
Number of LEPCs implementing the Clean Air Act 112 (r) chemical RMP- prevention programs	not available					LEPCs

Baseline. By FY 2000, 75% of facilities were compliant with RMP requirements and 10 states were implementing accident prevention programs.

Oil Spill Prevention Compliance

In 2003 600 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations, for a cumulative total of 3,495 facilities since 1997.

In 2001 EPA confirmed an additional 593 facilities in compliance with spill prevention, control, and countermeasures (SPCC) provisions, for a cumulative total of 2,345 facilities in compliance since 1997.

In 2000 EPA exceeded its goal, with an additional 678 facilities in compliance with spill prevention, control and countermeasure (SPCC) provisions of the oil pollution regulations, for a cumulative total of 1,752 facilities in compliance since 1997.

In 1999 EPA exceeded its goal by bringing 774 facilities into compliance with SPCC provisions

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Facilities in SPCC compliance.	774	678	593		600	facilities

Baseline: 1,752 facilities were in compliance in FY 2000.

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Oil Spill Response

In 2003 Respond to or monitor 300 significant oil spills in the inland zone.

In 2001 EPA significantly exceeded its goal by responding to 249 oil spills and monitoring 278 oil spills.

In 2000 EPA exceeded its goal by responding to 176 oil spills and monitoring response at 192 oil spills.

In 1999 EPA exceeded its goal by responding to 94 oil spills and monitoring response at 229 oil spills.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Oil spills responded to by EPA.	94	176	249			spills
Oil spills monitored by EPA.	229	192	278			spills
Oil spills responded to or monitored by EPA.					300	spills

Baseline: EPA typically responds to 70 oil spills and monitors 130 oil spill cleanups per year.

Ensure WIPP Safety

In 2003 Certify that 8,000 55 gallon drums of radioactive waste (containing approximately 24,000 curies) shipped by DOE to the Waste Isolation Pilot Plant are permanently disposed of safely and according to EPA standards.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of 55-Gallon Drums of Radioactive Waste Disposed of According to EPA Standards					8,000	Drums

Baseline: The Waste Isolation Pilot Plant (WIPP) near Carlsbad, NM was opened in May 1999 to accept radioactive transuranic waste. By the end of FY 2002, approximately 13,000 (cumulative) 55 gallon drums will be safely disposed. In FY 2003; EPA expects that DOE will ship an additional 8,000 55 gallon drums of waste to WIPP so that 2.4% of the planned waste volume, based on disposal of 860,000 drums over the next 40 years, is permanently disposed of safely and according to EPA standards. Number of drums shipped to the WIPP facility on an annual basis is dependent on DOE priorities and funding. EPA volume estimates are based on projecting the average shipment volumes over 40 years with an initial start up.

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RCRA Facility Standards and Compliance

In 2003 77.2% of the hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater. This represents an additional 39 facilities meeting the goal this year.

In 2001 An additional 249 hazardous waste management facilities have permits or other approved controls in place, for a cumulative total of 2,051 or 74% of the facility universe. The streamlined permitting standards rule was proposed October 12, 2001.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
RCRA hazardous waste management facilities with permits or other approved controls in place.	149					facilities
Propose final streamlined permitting standards		0	1			rulemaking
Percent RCRA hazardous waste management facilities with permits or other approved controls in place		62%	74%		77.2	percent
Initiate training program for new permitting standards.					1	training

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

Tribal Prevention Assistance

In 2003 EPA will provide grants to those tribes identified as having facilities subject to the Emergency Planning and Community Right-to-know Act (EPCRA).

In 2003 EPA will evaluate RCRA Subtitle C management needs for an additional 36 Federally recognized tribes.

In 2003 EPA will facilitate closing or upgrading existing high-threat open dumps on Indian Lands.

In 2001 Data is currently unavailable for the open dumps cleanup project.

In 2001 EPA developed a tribal strategy to promote development of tribal chemical emergency preparedness programs.

In 2001 EPA evaluated the needs of 177 tribes in FY 2001.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Provide funding assistance.					no target	grants
Development of draft strategy.			1			draft strategy
Tribes evaluated.			177		36	evaluations
Open dumps assessed.			not available		no target	assessments
Open dumps upgraded to comply with Subtitle D landfill standards.			not available		no target	upgrades
Open dumps with contents transferred and protections against future dumping in place.			not available		no target	sites
Provide support and funding to tribes participating in the multi-Agency Tribal Open Dump Cleanup Project.					no target	funding

Baseline: EPA is currently working to assess the number of tribes with chemical hazards on tribal lands.

Research

Scientifically Defensible Decisions for Active Man

In 2003 Deliver scientifically-enhanced 3MRA to OSW for their HWIR proposal and provide OSW/Regions with site-specific version of this exposure and risk assessment modeling system to implement HWIR and other applications for more cost-effective waste site management and protection of health and environment.

In 2001 EPA provided technical information to support RCRA regulatory development for waste identification, containment, and combustion.

In 2000 EPA provided targeted research and technical support for the active management of wastes by preparing nine provisional toxicity values from 38 feasibility assessments on 25 waste constituents. In addition, EPA published the journal article on factors that control Hg speciation in incinerators.

In 1999 Completed a report on the software modeling system for automating the Hazardous Waste Identification Rule (HWIR) assessment and completed a Beta-II version of this system.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
HWIR Human and Ecosystems Site (Generic) Exposure-Risk Assessment Screening Model, peer reviewed and applied to HWIR listed chemical exit levels	30-SEP-1999					
Beta version for comprehensive modeling system.	1					system

Develop provisional toxicity values for 10 - 20 waste constituents that do not have values describing their dose-response toxicological properties.	30-Sep-2000		values
Provide journal article on factors that control Hg speciation in incinerators	I		article
Update the HWIR99 modeling methodology for delisting hazardous wastes, in response to public comments on 1999 Federal Register Notice		I	update
Deliver science based enhancements to the 3MRA modeling system to support OSW's proposed HWIR and for conducting site-specific risk assessments.			model

Baseline: As a result of their regulatory reform efforts, OSW introduced in November 1999, a new open-architecture, multimedia, multipathway, and multi-receptor exposure and risk assessment (3MRA) methodology designed to support their Hazardous Waste Identification Rule (HWIR). Independent software testing, peer review on the system architecture and its internal science modules, and public comments on the Federal Register announcement are being addressed through refinements to the proposed modeling system. We also are improving some of the existing physical, chemical, and biological processes algorithms in the current system. The enhanced version will be used to support OSWs proposed HWIR (Proposal and Final Rule are expected about FY03 and FY05, respectively) which will update existing waste disposal regulations to eliminate possible over-regulation; 3MRA will serve as the scientific basis for establishing safe exit levels for certain wastes. The site-specific version will expand the screening level assessment capabilities to provide for site-specific exposure and risk assessments that will be used in HWIR implementation and other RCRA applications.

GOAL 06: 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.

OBJECTIVE 01: REDUCE TRANSBOUNDARY THREATS TO HUMAN AND ECOSYSTEM HEALTH IN NORTH AMERICA.

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

U.S. - Mexico Border Water/Wastwater Infrastructur

In 2003	Increase the number of residents in the Mexico border area who are protected from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructue by providing improved water and wastewater service.
In 2001	Provided protection to over 576,405 residents in the Mexico border area from health risks, beach pollution and damaged ecosystems from nonexistent and failing water and wastewater treatment infrastructure by providing improved water and wastewater service.
In 2000	10 Additional water/wastewater projects (cumulative total of 36) along the Mexican border have been certified for design-construction.
In 1999	9 additional water/wastewater projects along the U.S.-Mexico Border have been certified for design-construction.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of additional people in Mexico border area protected from health risks, because of adequate water & wastewater sanitation systems funded through Border Environmental Infrastructure Fund.			576,405		900,000	People
Projects certified for design-construction along the Mexican Border	9	10				Projects

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

Great Lakes: Binational Toxics Strategy

In 2003	Reduce Great Lakes toxic pollutants.
In 2001	Reduced Great Lakes toxic pollutants by remediating over 400,000 cubic yards of contaminated sediment..

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In 2000	Five assessments and characterizations (1 new and 4 follow-up) were conducted in Great Lakes Areas of Concerns Cataloged and publicized 8 actions toward reduction challenges under the BNS. Implemented 4 Great Lakes projects of Level I substances in support of toxics reductions.
In 1999	Cataloged and publicized 3 actions toward reduction challenges under the BNS. Initiated 12 Great Lakes Projects in support of toxics reduction.
In 1999	Seven assessments and characterizations (2 new and 5 follow-up) were conducted in Great Lakes Areas of Concern. Two of the five sediment cleanup demostrations started in 1996 have been completed.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Level I substances for which 1-2 toxic reduction activities are being implemented.		4				Substances
New assessments and characterizations to support State/community clean-up of contaminated sediments at Great Lakes AOCs.		1				Assessment
Follow-up assessments and characterizations to support State/community clean-up of contaminated sediments at Great Lakes AOCs.		4				Assessments
Cubic yards of contaminated sediment remediated in the Great Lakes.			401,500		100,000	Cubic yards
Great Lakes sediment cleanup demonstrations completed		2				Demonstration
Catalog and publicize actions (partnerships or virtual elimination demonstration projects) toward reduction challenges under BNS.	3					Actions
Great Lakes Projects initiated in support of toxics reduction	12					Projects
Assessments and characterizations at Great Lakes Areas of Concern	7					Assessments
Catalogued and publicized actions (partnerships or virtual elimination demonstration projects) initiated toward reduction challenges under BNS.		8				Actions
Completion and documentation of BNS analytical process for each of the Level 1 chemicals. Process includes info. gathering, analysis of reg. gaps, recommendations, & options for reductions		100				% Completion
Cumulative total (out of 5 started since 1996) of sediment cleanup demonstrations completed.	2					Cleanup demos

Baseline: U.S. baselines for toxic pollutants are, in most cases, based on the most recent and appropriate inventory as of the Great Lakes Strategy's 1997 signing. In the case of mercury, for example, the most recent inventory is based on estimated emissions during the early 1990s. In September 1999, GLNPO quantified for the first time annual contaminated sediment remediation. GLNPO will continue to quantify contaminated sediment remediation annually.

Great Lakes: Ecosystem Assessment

In 2003 Great Lakes ecosystem components will improve, including progress on fish contaminants, beach toxics, air toxics, and trophic status.

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

In 2000 6,000 of acres of acquatic, wetland, riverine, and terrestrial Great Lakes habitats were positively impacted.

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

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Great Lakes Ecosystem Indicator Indices with reports, addressing select fish contaminants, atmospheric deposition, limnology, biology, and sediments.		10				Indices
Acreage of total aquatic, wetland, riverine, and terrestrial Great Lakes habitat positively impacted.		6,000				Acres
Begin pilot project to implement 1 ballast water management recommendation addressing Great Lakes invasive species.		2				Pilot
Long-term concentration trends of toxics (PCBs) in Great Lakes top predator fish.			Uncertain		5%	Annual decrease
Long-term concentration trends of toxic chemicals in the air.			Declining		7%	Annual decrease
Total phosphorus concentrations (long-term) in the Lake Erie Central Basin.			Improving		10	Ug/l
Long-term dissolved oxygen depletion trend in Lake Erie.					3.11	Mg/l

Develop protocols for 5 of a proposed 12 GLNPO Monitoring Indexes, summarizing the prior year's data on select fish contaminants, atmospheric dep., limnology, biology, & sediments.	5					Protocols
Projects and acreage ecologically enhanced in terrestrial biodiversity investment areas	8/95,000					Projects/Acres
Model predictions for Lake Michigan for toxics reduction scenarios.		5				Predictions
Set of quantifiable targets for ecological enhancement in aquatic biodiversity investment areas	0					Set
Identify steps in ballast water management that will prevent the introduction on new non-indigenous species.	1					Set

Baseline: Identified targets are currently based on historic trends. The trend (starting with 1972 data) for PCBs in Great Lakes top predator fish toxics is expected to be less than 2 parts per million (the FDA action level), but far above the Great Lakes Initiative target or levels at which fish advisories can be removed. The trend (starting with 1992 data) for PCB concentrations in the air is expected to range from 50 to 250 picograms per cubic meter. The trend (starting with 1983 data) for phosphorus concentrations is expected to range from 4 to 10 parts per billion, levels established in the Great Lakes Water Quality Agreement. The 1970 baseline of oxygen depletion of the Lake Erie central basin is 3.8 mg/liter/month. EPA is working with its partners to refine targets within the next 3 years.

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Mexico Border Outreach

In 2003 Develop air quality assessments and improvement programs to attain air quality standards in border communities.

In 2003 Expand hazardous waste management and pollution prevention practices in the maquiladoras.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
U.S. cities along the Mexico Border region carrying out air emissions inventories.					1	cities
Number of maquiladoras that have implemented pollution prevention controls after a site assessment visit, workshop, or training session.					314	maquiladoras

Baseline: Many border area residents are exposed to health-threatening levels of air pollutants including ozone, particulate matter, carbon monoxide and sulfur dioxide. The need to evaluate levels of targeted air pollutants is particularly urgent in heavily populated urban areas where air quality problems are

compounded by emissions from increasing numbers of vehicles - many of which are older and poorly maintained; extensive industrial activity; and numerous air sources (e.g., unpaved roads, waste disposal fires) To date seven out of the 14 sister-city pairs have air quality networks established and operating.

OBJECTIVE 02: REDUCE GREENHOUSE GAS EMISSIONS.

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

Reduce Greenhouse Gas Emissions

In 2003	Greenhouse gas emissions will be reduced from projected levels by approximately 73.5 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations thereby offsetting growth in greenhouse gas emissions above 1990 level by about 20%.
In 2001	The data for this annual performance goal will not be finalized until mid-2002.
In 2000	Greenhouse gas emissions were reduced from projected levels by more than 59.3 MMTCE per year through EPA partnerships with businesses, schools, State and local governments, and other organizations thereby offsetting growth in GHG emissions above 1990 level by about 20%.
In 1999	EPA reduced US greenhouse gas emissions by 46 million metric ton carbon equivalent (MMTCE) per year through partnerships with businesses, schools, state and local governments, and other organizations.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Annual Greenhouse Gas Reductions - All EPA Programs	46	59.3	On track		73.5	MMTCE
Greenhouse Gas Reductions from EPA's Buildings Sector Programs (ENERGY STAR)	12.7	15.2	On track		19.5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Efficiency/Waste Management Programs	4.5	5.5	Not on track		6.5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial Methane Outreach Programs	8.5	13.8	On track		17.5	MMTCE
Greenhouse Gas Reductions from EPA's Industrial HFC/PFC Programs	15.0	21.4	On track		25 6	MMTCE
Greenhouse Gas Reductions from EPA's Transportation Programs	1.1	1.7	Not on track		2.4	MMTCE
Greenhouse Gas Reductions from EPA's State and Local Programs	1.6	1.7	Not on track		2.0	MMTCE

Baseline: The baseline for evaluating program performance is a forecast of U.S. greenhouse gas emissions in the absence of the Climate Change Action Plan programs. The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan. The updated baseline includes energy forecasts and economic growth projections. The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update. The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001.

Reduce Energy Consumption

In 2003 Reduce energy consumption from projected levels by more than 95 billion kilowatt hours, contributing to over $11 billion in energy savings to consumers and businesses.

In 2001 The data for this annual performance goal will not be finalized until mid-2002.

In 2000 Reduced energy consumption from projected levels by about 74 billion kilowatt hours, resulting in over $8 billion in energy savings to consumers and businesses that participate in EPA's climate change programs.

In 1999 US energy consumption was reduced by 50 billion kilowatt hours per year, including annual energy bill savings to consumers and businesses of over $3 billion.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Annual Energy Savings - All EPA Programs	50	74	On track		95	Billion kWh

Baseline: The baseline for evaluating program performance is a forecast of U.S. greenhouse gas emissions in the absence of the Climate Change Action Plan programs. The baseline was developed as part of an interagency evaluation of the Climate Change Action Plan in 1997, which built on a similar baseline forecast that was developed in 1993 for the Climate Change Action Plan. The updated baseline includes energy forecasts and economic growth projections. The baseline is discussed at length in the Climate Action Report 1997, which includes a discussion of differences in baselines between the original Climate Change Action Plan and the 1997 baseline update The baseline is currently under review as part of the interagency evaluation process for preparing the Climate Action Report 2001.

Clean Automotive Technology

In 2003 Transfer hybrid powertrain components, originally developed for passenger car applications, to meet size, performance, durability, and towing requiremnts of Sport Utility Vehicle and urban delivery vehicle applications with an average fuel economy improvement of 20% over the baseline.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Fuel Economy of EPA-Developed SUV Hybrid Vehicle over EPA Driving Cycles Tested					24.2	MPG

Baseline: The average fuel economy of all SUVs sold in the US in 2001 is 20.2 mpg. Values for 2001, 2002, and 2003 represent 10%, 15%, and 20% improvements over this baseline, respectively. The long-term target is to demonstrate a practical and affordable powertrain that is 30% more efficient by 2005, and 100% more efficient by 2010.

Research

Global Change Research - Human Health and Ecosyste

In 2003	Assess the potential effects of climate change on weather-related morbidity.
In 2003	Build the capacity to assess global change impacts on air quality by downscaling meteorological data to regional scales and quantifying the effects of advanced fuel/vehicle combinations.
In 2001	Assessed the consequences of global change (particularly climate change and climate variability) on human health and ecosystems.
In 2000	EPA assessed the consequences of global change and climate variability on human health by completing the products below and other research activities.
In 2000	Work to assess the impacts of global change on ecosystem services was delayed until FY02.
In 1999	A paper on problem formulation for ecosystem services sector assessments has been submitted to a peer-reviewed journal. A draft chapter that develops the "problem formulation" framework has been included in the Mid-Atlantic Regional Assessment. The climate change indicators report is delayed.
In 1999	Assessments linking regional hydrology to climate change were delayed until the 2nd quarter of FY 2001.
In 1999	The Mid-Atlantic and Great Lakes Regional Assessments were completed. These will contribute to the National Assessment of "Potential Consequences of Climate Change and Variability to the United States," required under the Global Change Research Act of 1990.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Assess potential effects of global change on ecosystem services.		30-Sep-2002				indicators
Complete a Health Sector Assessment of the potential consequences of climate change and variability for public health, for the USGCRP National Assessment process.		1				assessment

Provide preliminary results from a case study which will determine how climate change & variability affect the formation of trop. ozone in a city & consider the viability of certain adaptation options		N/A			results
Develop prototype ecological and health data and information system to integrate with the Global Climate Data and Information System (GCDIS).		1			info. system
Report on problem formulation for ecosystem services sector assessment.	1 report				
Report on the development and use of climate change indicators.					
Conduct preliminary assessment of regional scale consequences of climate change at three geographic locations (Mid-Atlantic, Gulf Coast, and upper Great Lakes).	2				assessment
Report on the potential effects of climate change on urban air quality.			0		report
Preliminary report assessing potential health effects of global change by linking human health and ecological risk.			1		report
Complete initial assessment of air quality impacts of several potential transportation sector technology paths as input to a study of global change on tropospheric ozone concentrations.			1		assessment
Produce a final, comprehensive assessment report which quantifies the potential effects of climate change on weather-related morbidity.				1	report
In support of the air quality assessments, produce interim assessment of how advancements in hydrogen/fuel cell and gasoline hybrid vehicles affect emissions of ozone precursors and PM.				1	assessment
Produce a preliminary analysis of meterological data and air quality using statistical methods.				1	analysis
Peer-reviewed reports for decision-makers and the public on the potential consequences of global change on 3 regions and on human health, which are the finished products of a multi-year effort.			3		reports

Baseline: In April 2000, the Health Sector Assessment Team participating in the first USGCRP National Assessment of the "Potential Consequences of Climate Variability and Change" published its Executive Summary. The entire assessment was published in May 2001 as a Special Issue of Environmental Health Perspectives. The Health Sector Assessment report identified key remaining research needs, which included weather-related morbidity effects. By the end of FY 2003, assessments will be completed of (1) heat-related morbidity in children; (2) the relationship between weather variability and violent crime; (3) the effects of inclement weather on accidents and injuries, and (4) the effects of extreme heat on emergency room visits and hospital admissions.

Air pollution continues to be a widespread public health and environmental problem in the United States. Previous studies suggest that global change (climate change and variability, UV-radiation, land use change) could have significant impacts on ambient air quality. Global climate change will likely result in changes in regional and local weather. While few studies have explicitly investigated the effects of global change on air quality, the available evidence (e.g., weather-ozone studies, basic atmospheric chemistry, sensitivity of emissions to weather and land use, etc.) raises concerns that global change could adversely affect air quality. Two pollutants likely to be affected by global change are ozone and particulate matter and they are also of significant interest to the Agency. By the end of FY 2003, two important components of an integrated air quality assessment will be completed: (1) downscaling of global meteorological data to geographic scales appropriate for air quality assessments; and (2) quantification of the air implications of advanced fuel/vehicle combinations likely to be used to adapt to climate change.

OBJECTIVE 03: REDUCE STRATOSPHERIC OZONE DEPLETION.

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

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Restrict Domestic Consumption of Class II HCFCs

In 2003 Restrict domestic consumption of class II HCFCs below 9,960 ODP-weighted metric tonnes (ODP MTs) and restrict domestic exempted production and import of newly produced class I CFCs and halons below 10,000 ODP MTs.

In 2001 The 2001 results will be available after March 15, 2002.

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Domestic Consumption of Class II HCFCs	<208,400 MTs	13,180	On track		<9,960	ODP MTs

Domestic Exempted Production and Import of Newly Produced Class I CFC s and Halons	<130,000 MTs	462	On track	<10,000	ODP MTs

Baseline: The base of comparison for assessing progress on the 2003 annual performance goal is the domestic consumption cap of class II HCFCs as set by the Parties to the Montreal Protocol. Each Ozone Depleting Substance (ODS) is weighted based on the damage it does to the stratospheric ozone - this is its ozone-depletion potential (ODP). Beginning on January 1, 1996, the cap was set at the sum of 2.8 percent of the domestic ODP-weighted consumption of CFCs in 1989 plus the ODP-weighted level of HCFCs in 1989. Consumption equals production plus import minus export.

Montreal Protocol Fund

In 2003 Provide assistance to at least 60 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

In 2001 The US provided assistance to 76 developing countries to facilitate emissions reductions toward achieving the requirements of the Montreal Protocol.

In 2000 Provided assistance to 50 developing countries to facilitate emissions reductions and toward achieving the requirements of the Montreal Protocol.

In 1999 Through our contribution to the Multilateral Fund, assistance was provided to 50 countries working toward achieving the Montreal Protocol.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Assistance to Countries Working under Montreal Protocol	50	50	76		60	Countries

Baseline: In an average year the Multilateral Fund, created through the Protocol, approves projects to assist over 50 developing countries in their efforts to comply with the phaseout of ODSs

OBJECTIVE 04: PROTECT PUBLIC HEALTH AND ECOSYSTEMS FROM PBTS AND OTHER TOXICS.

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

Eval. Domest. Suitab. of Internal Consens. Testing

In 2003 Evaluate the domestic suitability of international consensus testing decisions made in the OECD International Screening Information Data Set (SIDS) program and obtain needed testing as required.

In 2001 The shortfall in the number of chemicals in this relatively young, voluntary program is due to a lack of committments from Industry, as well as debate within member countries on which chemicals should be brought forward.

In 2000 A change in the Organization for Economic Cooperation and Development (OECD) program and a meeting delay caused the Screening Information Data Set (SIDS) end of year results to fall short. Delays in the 12th OECD Addendum publication caused a shortfall in guidelines harmonization.

In 1999 EPA is pursuing chemical testing through its domestic HPV Challenge program with industry and the OECD's collaborative Program on Screening Information Data Sets. EPA completed 36 SIDS reviews in FY 1999. The OECD guidelines are still under review by other OECD member countries.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Complete the review of testing needs for chemicals processed through the OECD- sponsored SIDS program	36	28	40		75	Test Reviews
Complete OECD harmonization	0	5	4			Test Guidelin
Prepare harmonization documents					5	Dft/Fnl Guidlns

Baseline: (1)Complete testing and data on 25 chemicals processed through the OECD sponsored SIDS program in 1998. (2) Guideline harmonization baseline is 82 test guidelines (health, ecosystem, exposure, physical and chemicals properties) and 32 in draft. (3)In addition to finalized guidelines: (a) Drafts of New Guidelines and Guidance documents sent out for member country review, (b) Drafts of revised Existing Guidelines and Guidance documents that have been sent out for member country review are included.

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POPs Negotiation

In 2003 Reduce environmental exposure to US and selected Countries of concern from Persistent Organic Pollutants (POPs) through the implementation of the Stockholm Convention on POPs.

In 2001 Three priority activities were initiated in developing countries to implement the newly concluded global convention on Persistent Organic Pollutants.

In 2000 Successfully concluded international negotiations on a global convention on Persistent Organic Pollutants (POPs) reaching agreement on POPs selection criteria, technical assistance, and risk management commitments on specified POPs.

In 1999 A negotiated agreement has been reached for USG polices and international agreement was reached in June 1999 on criteria for selecting Persistent Organic Pollutants to be covered in a new global POPs treaty, and No agreement has been reached yet on capacity building.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Agreed USG policies on selection criteria for Persistent Organic Pollutants	yes					negotiations
Production of a final agreed convention text		yes				report

Agreement on selection criteria and methodology	yes				report
Number of POPs implementation activities supported.		3			activities
Develop baseline information on atmospheric transport of POP chemicals to sensitive US ecosystems.				1	station
Conduct source inventories in selected Asia-Pacific countries				4	inventories
50% of farmer-owned obsolete POP pesticide stockpiles are removed as a result of training, in priority countries and or regions in Central America.				5	training
Assist countries in the Carribean to address targeted PCB sources.				1	Mgmt. Plan

Baseline: With the signing of the global POPs convention in May 2001 EPA will work on domestic implementing legislation (e.g., a FIFRA amendment) and projects to support implementation by key developing countries (e.g., China). In FY2001 EPA worked with UNEP to identify regions (e.g., Sub-Saharan Africa, Central America, Southeast Asia) which would benefit from such support from EPA, and we have started projects on the basis of available funding. Whenever possible EPA will support projects which also promote compliance with the global Prior Informed Consent (PIC) regime and the international commitment to improve chemicals management capabilities, as set out in the Bahia Declaration from the Third Session of the Intergovernmental Forum on Chemical Safety in October 2000.

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Lead Gasoline Phase-Out

In 2003 An additional two countries make national commitments to phase out the use of lead in gasoline.

In 2001 Target Met. Philippines and Vietnam have committed to lead phase-out. Also, EPA was an active player in achieving the "Declaration of Dakar," which is a statement by representatives of 25 Sub-Saharan African countries presenting a timeline for phasing lead additives out of gasoline

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of commitments to Pb phaseout			2		2	countries
Global reduction in Pb gasoline.			10		10	percent

Baseline: Fourteen countries have phased out the use of Pb gasoline. Twelve countries and the European Union are working on the phase out of Pb gasoline.

OBJECTIVE 05: INCREASE DOMESTIC AND INTERNATIONAL USE OF CLEANER AND MORE COST-EFFECTIVE TECHNOLOGIES.

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

Enhance Institutional Capabilities

In 2003	Enhance environmental management and institutional capabilities in priority countries.
In 2001	Target Met. EPA conducted environmental institutional building and enhanced the abilities of the following countries to protect their environments and those of the gloabal common: El Salvador, Nicaragua, Honduras, Mexico, China, Thailand, Eygpt, Indonesia, Vietnam, & Philippines.
In 2000	Delivered 12 international training modules; implemented 6 tech assistance/technology dissemination projects; implemented 5 cooperative policy development projects; and disseminated information products on US environmental technologies and techniques to 3100 foreign customers.
In 1999	3 of the 4 program areas for enhancing global environmental management were met.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of training modules delivered	16	12				modules
Number of tech assistance or tech dissemination projects carried-out	6	6				projects
Number of cooperative policy developement projects implemented		5				projects
Number of info products disseminated to foreign customers	2500	3100				products
Number of capacity buliding activities scheduled for initiation in FY 2000 and beyond	2					report
Number of countries or localities (3) that have adopted new or strengthened environmental laws and policies			3			countries
Number of organizations (3) that have increased environmental planning, analysis, and enforcement capabilities			3			organizations
Number of organizations (3) that have increased capabilities to generate and analyze environmental data and other information			3			organizations
Number of organizations (3) that have increased public outreach and participation			4			organizations
Number of targeted sectors (3) that have adopted cleaner production practices			2			industry sector
Number of cities (3) that have reduced mobile-source based ambient air pollution concentrations			3			cities
Assist in the development or implementation of improved environmental laws or regulations in priority countries.					1	countries
Increase the transfer of environmental best practices among the U S. and its partner countries and build the capacity of developing countries to collect, analyze, or disseminate environmental data.					3	countries
Increase the capacity of programs in Africa or Latin America to address safe drinking water quality issues.					1	countries

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

World Trade Organization - Regulatory System

In 2003 All trade agreements negotiated after 2001 contain environmental provisions.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Trade agreements and world trade organization provisions contain environmental text					1	Agreements

Baseline: Currently, the World Trade Organization has no formal policy for involving the public in its decision making and dispute resolution processes.

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GOAL 07: QUALITY ENVIRONMENTAL INFORMATION

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

OBJECTIVE 01: INCREASE AVAILABILITY OF QUALITY HEALTH AND ENVIRONMENTAL INFORMATION.

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

Process and Disseminate TRI Information - OEI

In 2003	The public will have better information on toxic releases and wastes being managed in their communities. EPA will also work with the owners and operators of facilities to reduce the record-keeping and reporting burdens associated with submitting their TRI forms to EPA by 14%.
In 2001	120,000 chemical submissions and revisions processed; published annual summary of TRIS database in April 2001; and TRI Public Data Release published in April 2001
In 2000	Processed all submitted facility chemical release reports, published annual summary of TRI data, provided improved information to the public about TRI chemicals, and maximized public access to TRI information.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
TRI Public Data Release		Published	Published			Published
Chemical submissions and revisions processed.		119,000	120,000			Forms
TRIS database complete and report issued		On Target	Published			Published
Data quality: keep data entry error rate below 1% per form						Error Rate
Increase magnetic media use for TRI reporting						Magnetic Media
The number of forms containing Toxic Release Inventory data being reported electronically on computer diskettes will increase from 85% to 90%					90	Percent

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

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Enhanced Public Access

In 2003 Improve public access to compliance and enforcement documents and data through multimedia data integration projects and other studies, analyses and communication/outreach activities

In 2001 EPA improved public assess to compliance but in areas covered by the performance measures EPA did not meet targets.

In 2000 EPA improved public access to compliance and enforcement documents and data, particularly to high risk communities, through multimedia data integration projects and other studies, analyses and communication/outreach activities.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Increase use of Sector Facilities Indexing Project website user sessions over FY99 levels		2				percent
Increase by 50% (over FY99 levels) the number of states with direct access to Integrated Data for enforcement Analysis (IDEA)		34				states
Percent of OECA policy and guidance documents available through the Internet		94				percent
By the end of FY 2001, all ten EPA Regions will have an enforcement and compliance web-site			9			Websites
Make 90% of enforcement and compliance policies and guidances issued this FY available on the Internet within 30 days of issuance			86		90	Percent
By April 2001, make summaries of all significant cases available on the Internet			50			Percent

Baseline: OECA enhances public access to compliance and enforcement documents through our efforts to make available through the internet newly issued enforcement and compliance documents.

Information Exchange Network

In 2003 Decision makers have access to the environmental data that EPA collects and manages to make sound environmental decisions while minimizing the reporting burden on data providers.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003

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The number of states using the Central Data Exchange will increase to 45 as the means by which they submit data.	45	States
Implement four data standards in 13 major systems and develop four additional standards in 2003.	4	Data Standards

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

OBJECTIVE 02: PROVIDE ACCESS TO TOOLS FOR USING ENVIRONMENTAL INFORMATION.

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

Index Watershed Indicators

In 1999 Index of Watershed Indicators has been updated. EPA released two new versions of IWI which include updates of six indicators and three new measures. To enhance the utility of the IWI, EPA also developed an IWI data index, a catalog of maps (Watershed Atlas) and new combinations of data layers.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Updated IWI system, adding data layers and data inputs.	1					System

Baseline.

Improved Access to Information on Pesticides

In 1999 The Agency focused on educating workers and health care providers and continued development of the pesticide environmental stewardship program. EPA established the Pesticide Safety Website and distributed the "Pesticides and Food" brochure to grocery stores nationwide.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Annual consumer brochure on the health effects of pesticides	1					Brochure

Baseline:

Improve EPA's Internet Site

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In 1999 EPA improved the quality, effectiveness and efficiency of EPA's Internet site by increassing the number of Website hits by 42%, increasing the number of Internet site pages available by 41.4% and increasing the number of distinct hosts accessing the Website by 25.3%

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percentage of website hits.	42					Percent
Percentage of internet site pages available.	41.4					Percent
Percentage of distinct hosts accessing the Website.	25.3					Percent

Baseline:

Environmental Justice

In 2003 Ensure that EPA's policies, programs and activities address disproportionately exposed and under-represented population issues so that no segment suffers disproportionately from adverse health and environmental effects.

In 2001 While EPA did meet the measuresabout he public meetings and responding to requests during NEJAC meetings, EPA did not meet the other targets.

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

In 2000 Through efforts such as the distribution of grants and holding community meetings, EPA worked to ensure that the Agency's policies, programs, and activities address minority and low income issues so no segment of the population suffers disproportionately from adverse environmental effects.

In 1999 EPA actively promoted environmental justice issues by holding 16 NEJAC meetings (exceeding the target of 10) and by providing environmental justice grants to 100 communities.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Award grants to low income and minority communities for addressing environmental problems.	100					Grants
NEJAC Meetings	16					Meetings
Hold 25 EPA-sponsored public meetings held where disproportionately impacted and disadvantaged communities participate		31	25			meetings
Respond within 60 days to 75% of requests made to each Region and National Program Manager to address complaints heard during public comment period at NEJAC		75	75			percent

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Conduct 18 National Environmental Justice Advisory Commitee (NEJAC) meetings and focused roundtables in local communities where problems have been identified.	18	13		meetings
Hold one NEJAC public meeting annually where one environmental policy which impacts disadvantaged communities is discussed and the communities actively participate.			1	Meeting
Continue to engage the agencies in national issues of environmental concerns through the collaborative efforts of the IWG through the publication "Action Agenda for Environmental Justice".			1	Agenda
Award grants to organizations which address environmental problems in communities disproportionately impacted by environmental hazards.			90	grants

Baseline: The Agency works to address issues affecting disproportionately exposed and under-represented populations from adverse health or environmental effects. EPA identifies problem areas through: public comments received during the National Environmental Justice Advisory Committee (NEJAC) meetings; reviewing Environmental Impact Statements (EIS) filed under the National Environmental Policy Act (NEPA) in which environmental justice (EJ) indicators occur; concern from communities about new or renewals of permits under RCRA, CWA, CAA, etc.; and complaints filed under Title VI of the Civil Rights Act. EPA also works to address these issues through the Federal Interagency Working Group on Environmental Justice and by awarding grants to communities for addressing environmental problems.

Data Quality

In 2003 The public will have access to a wide range of Federal, state, and local information about local enviromental conditions and features in an area of their choice

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Window-to-My Environment is fully operational and serving citizens across the country with Federal, state, and local environmental information specific to an area of their choice					Fully	Operational
Percent compliance with 13 criteria used by OMB to assess Agency security programs reported annually to OMB under the Government Information Security Regulatory Act.					75	Percent

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

Research

Environmental Science Information

In 2003 Deliver assessments of effects of exposure to chemicals on human health and the environment to EPA, other governmental organizations, industry, consultants, academics, and nongovernmental organizations to promote scientifically sound, consistent risk assessments to enhance protection of human health

In 2001 EPA collected, managed, and presented environmental information for the benefit of the Agency and the public in order to enhance the availability and utility of data, information, and tools for decision-making.

In 2000 Five of the 12 planned Agency-wide human health assessments were completed. Several assessments were not completed due to the necessity to resolve scientific issues and respond to peer review comments

In 1999 Eight (8) pilot projects were completed in FY 1999 under the EMPACT program. These projects implemented timely and high quality environmental monitoring technologies in EMPACT cities.

In 1999 Two IRIS summary documents were completed. Delays in completing other IRIS summaries are due mainly to science issues inherent to completing the assessments.

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Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Add or update to IRIS 15 summaries of the potential adverse health effects of specific chemical substances.	2 Summaries					
Develop Agency consensus human health assessments (new and updated assessments) of 12 environmental substances of high priority to EPA and make them publicly available on IRIS.		5				assessments
Award 5-7 grants to EMPACT cities to implement timely and high quality environmental monitoring technologies.	8					Grants
Develop new and/or update Agency consensus human health assessments of 15 environmental substances of high priority to EPA and make them publicly available on IRIS.			7			assessments

Develop a priority list of existing data, information, and tools to provide assistance to EPA laboratories in the initial development of their inventories, to be made publicly available through EIMS.		1		list
Develop Agency consensus for human health assessments (new/updated) for 8-10 environmental substances of high priority to EPA, and make these accessible on the EPA IRIS Internet site.			8-10	assessments

Baseline: The Integrated Risk Information System (IRIS) is an electronic data base containing information on human health effects that may result from exposure to various chemicals in the environment for use in risk assessments, decision-making, and regulatory activities. Through the IRIS Program, ORD administers an Agency-wide process of chemical nomination, assessment, consensus building, and peer review through which assessments on IRIS are produced and updated As of December 2000 , IRIS contained entries for 541 compounds. The IRIS program is continuously producing new assessments and updating existing IRIS assessments as new information becomes available. The information in IRIS is intended for those without extensive training in toxicology, but with some knowledge of health sciences. The individual chemical files in IRIS contain descriptive and quantitative information in the following categories: oral reference doses and inhalation reference concentrations (RfDs and RfCs, respectively) for chronic noncarcinogenic health effects; hazard identification, oral slope factors, and oral and inhalation unit risks for carcinogenic effects.

OBJECTIVE 03: IMPROVE AGENCY INFORMATION INFRASTRUCTURE AND SECURITY

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

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Information Security

In 2003 OMB reports that all EPA information systems meet/exceed established standards for security.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Percent compliance with 13 criteria used by OMB to assess Agency security programs reported annually to OMB under the Government Information Security Regulatory Act.					75	Percent
Percent of intrusion detection monitoring sensors installed and operational.					75	Percent

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

GOAL 08: SOUND SCIENCE, IMPROVED UNDERSTANDING OF ENV. RISK AND GREATER INNOVATION TO ADDRESS ENV. 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.

OBJECTIVE 01: CONDUCT RESEARCH FOR ECOSYSTEM ASSESSMENT AND RESTORATION.

Provide the scientific understanding to measure, model, maintain, and/or restore, at multiple spatial scales, the present and future integrity of highly valued ecosystems.

Research

Estuarine Ecosystem Conditions

In 2003	Provide the public with a reliable and statistically valid baseline for the condition of the Nation's estuaries against which to measure the success of ecosystem protection and risk management practices.
In 2001	Baseline conditions in the ecological condition of the Nation's estuaries have been established from which changes and ultimately trends can be evaluated at regional scales.
In 2000	EPA developed monitoring designs for National coastal monitoring by completing the products below and other research activities.
In 2000	EPA developed monitoring designs, including indicators, for streams in western watersheds by completing the products below and other research activities.
In 2000	EPA reported on monitoring findings in the Mid-Atlantic Region as a cost-effective means of measuring the condition of these systems by completing the products below and other research activities.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
A final report on the extent and magnitude of fish tissue contamination in small, wadeable streams in the Mid-Atlantic Region as means of identifying high risk areas.		1				final report
Draft design for a National coastal monitoring program to assess the biological condition of estuaries		1				draft design

Final report on the relationship between macroinvertebrate & periphyton assemblages & chemical & physical stressors to verify the applicability of these biological indicators in the Mid-Atlantic.	1				report
Refined coastal health indicators developed and applied in salt marsh estuaries and near coastal water of the Gulf and South Atlantic.	28-Feb-2001				indicators
Develop a final work plan for western stream condition monitoring.	30-Sep-2000				
Report describing the condition of the Nation's Estuaries.		1			report
Report on the condition of Nation's estuaries based on a statistically valid sampling design so that data is comparable across the Nation.			1		report

Baseline: The coastal monitoring strategy responds to the needs of EPA and the coastal states and tribes for information on the health of the coastal environment that will inform decisions to protect these vital coastal resources. For the past decade, ORDs Environmental Monitoring and Assessment Program (EMAP) has been working with federal, state, and academic scientists to develop the most cost-effective methods for measuring the physical, chemical, biological, and ecological conditions of coastal waters, bays, estuaries, beaches, and coastal wetlands The data from this decade of EMAP research and field surveys in select areas of the country were combined with select data from EPA (ORD and OW), NOAA, Department of Interior, and Department of Agriculture to form an assessment of estuarine condition in 2001. Because of the need to determine current environmental health baselines and quantitatively measure improvement for GPRA, EPA developed an initiative that would implement the proven science developed by EMAP for the ecosystems found throughout the US coastal waters. Starting in 2000, survey information has been collected on the condition of estuarine resources, and the kinds of problems associated with them, in each conterminous coastal state and in Puerto Rico. In 2003, these data will be compiled for the first comprehensive National Coastal Assessment of estuarine condition in the contiguous U.S. This report also will compare the condition of estuaries in the period 1990-1997 to the period 2000-2001 For the first time, this will provide the public with a reliable picture of the current and changing condition of the Nations estuaries and coastal waters with known confidence, and using consistent measurements.

Integrated Ecosystem Modeling

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003

Peer-reviewed draft TMDL Implementation Protocol/Prototype approach for estimating loadings of sediments to be used by OW, Regions, Tribal Governments, and States in implementation of CWA S.303.	1	protocol
Release of multimedia wildlife exposure assessment model which consists of a computer friendly system to assess and integrate exposures of wildlife to env. contaminants in soil,water,food,and air	31-Dec-2002	model
Develop expanded guidance for performing an ecological risk assessment; conduct a series of colloquia and a workshop on ecological assessment issues	30-Sep-2001	guidance
Final report on relationships between wetland extent and land-use patterns with stream water quality and biotic communities in watersheds of the Lake Superior basin.	1	report

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

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OBJECTIVE 02: IMPROVE SCIENTIFIC BASIS TO MANAGE ENVIRONMENTAL HAZARDS AND EXPOSURES.

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

Research

Human Health Risk Assessment Research

In 2003 Develop, summarize, integrate, and demonstrate an initial set of tools (methods, measurements, models) so EPA can assess aggregate exposures and risks from environmental contaminants in multiple media and determine how to best minimize/eliminate human and environmental harm from these contaminants.

In 2001 EPA developed a draft research strategy on human health risk assessment. Although publication has been delayed until FY 2002, the fundamentals of this strategy are being implemented into an analysis of data from the National Human Exposure Assessment Survey (NHEXAS).

In 2000 Reports on the use of mechanistic data in developmental toxicity risk assesssment and assessments of pesticide exposures to children were published. The Exposure Factors Handbook was released in FY 2001.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Assess pesticide exposures to children in Washington, Minnesota, and Arizona.		1				assessment
Report on the use of mechanistic data in developmental toxicity risk assesssment.		1				report
Develop Exposure Factors Handbook for children		1				Handbook
Publish peer reviewed research strategy on human health risk assessment.			0			resrch strategy
NHEXAS. Begin implementation of Strategic Data Analysis Plan.			1			strategic plan
Provide access to human exposure data via the world wide web to states, Regions, Program Offices, exposure modelers, and other stakcholders for use in aggregate and cumulative risk assessments.					1	data base
Test and evaluate a framework for modeling aggregate exposures from source through human exposure to human dose.					1	model
Publish data and results from the National Human Exposure Analysis Survey (NHEXAS) that will help characterize exposures to key pollutants and summarize human activities that impact exposure.					1	report
Analyze NHEXAS data for use in updating the Exposure Factors Handbook.					1	analysis

Baseline: Currently, risk assessments often focuses on a small component of the total exposure and risk that people face. Aggregate exposure and risk expands that consideration to include all the pathways and routes by which people come into contact with pollutants: it is a first step in understanding the cumulative total of peoples exposures and risks. A variety of tools (measuremnt and analysis methods, measurement studies and data, and human exposure/risk models) are currently under development to allow estimation of aggregate exposures and risks. In FY03, research will provide: improved information on sources of exposure; analysis of actual aggregate exposures of people in the U.S. as observed in probabilistic exposure measurement studies; development and demonstration of models for describing the many ways pollutants move from sources to exposures to human dose; and the

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gathering together and publication of information and techniques needed to assess aggregate exposures and risk for use by the scientific community, risk assessors, and the public. Providing tools to assess aggregate exposure and risk is an initial step in understanding cumulative exposures and risks, and helping us move to more outcome-oriented measures of Agency actions to protect human health.

OBJECTIVE 03: ENHANCE CAPABILITIES TO RESPOND TO FUTURE ENVIRONMENTAL DEVELOPMENTS.

Enhance EPA's capabilities to anticipate, understand, and respond to future environmental developments; conduct research in areas that combine human health and ecological considerations; and enhance the Agency's capacity to evaluate the economic costs and benefits and other social impacts of environmental policies.

Research

Mercury Research

In 2003 Support development of regulations on mercury emissions from coal-fired utility boilers by producing data on measurement methods and control technology performance, cost, and residues so that EPA can effectively reduce human health and environmental risk from mercury.

In 2001 EPA developed a new peer-reviewed and consensus IRIS entry for methylmercury, including a reference dose (RfD). The results of bench and pilot testing aimed at managing mercury risks from coal-fired utility boilers was delayed until FY 2002

In 2000 The mercury research strategy was completed as scheduled and will act as a guide in the execution of an EPA-based mercury research program.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Provide a mercury research plan to act as a guide in the execution of an ORD-based mercury research program.		1				plan
Publish results of bench and pilot testing aimed at identifying improved sorbents for mercury mitigation from coal-fired utility boilers.			0			publication
Make recommendations, as appropriate, for revision of EPA's RfD for methylmercury based on analysis of the National Academy of Sciences report on mercury.			30-Sep-2001			recommendations
Report on the performance/cost of reducing mercury emissions taking into account coal properties,combustion conditions, flue gas cleaning technologies and other air pollution control systems.					1	report

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Baseline: EPAs Mercury Study Report to Congress identified emissions from coal-fired utilities as one of the most significant contributors of mercury to the air. On December 14, 2000, EPA determined that mercury emissions from coal-fired utilities needed to be regulated. Regulations are to be promulgated in three years and finalized a year after that. The most cost-effective technological approaches for controlling mercury emissions from utilities are not well understood. Control technologies must be evaluated prior to regulation with a goal of minimizing mercury emissions at the lowest possible cost.

OBJECTIVE 04: IMPROVE ENVIRONMENTAL SYSTEMS MANAGEMENT.

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

Research

Pollution Prevention Tools and Methodologies

In 2001 EPA integrated a waste reduction algorithm with costing software and a chemical process simulation package, and completed a decision support tool for life cycle analysis of municipal solid waste to enhance a preventive approach to risk management and the use of pollution prevention options.

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

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

In 1999 Completed a draft prototype decisoin support tool for alternative municipal solid waste management.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Complete prototype decision support software for alternative municipal solid waste management options.	30-sep-1999					
Complete dev. of the PARIS II Software, a tool to design env. benign solvents, & complete dev. & integration of WAR Algorithm, v 1.0, into a commercially available chemical process simulator		30-Sep-2000				software
Complete BETA testing of decision support tool for life cycle analysis of municipal solid waste management options.		30-Sep-2000				tool
Provide an upgraded & enhanced Solvents Alternatives Guide (SAGE) software (expert) to incl. cost algorithms, giving it cost projection capability to complement its process selection capability		30-Sep-2000				software

Integrate the process change/waste reduction algorithm (WAR) with costing software (Icarus) and a chemical process simulation package (Aspen).	1	package
Complete a decision support tool for life cycle analysis of municipal solid waste management options.	1	tool & report
Publish a peer-reviewed protocol for conducting Risk Management Evaluations.	0	protocol
Complete grant on development of tool for predicting biodegradability of compounds.	0	grant report

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

New Technologies

In 2003 Develop 10 testing protocols and complete 40 technology verifications for a cumulative Environmental Technology Verification (ETV) program total of 230 to aid industry, states, and consumers in choosing effective technologies to protect the public and environment from high risk pollutants.

In 2001 EPA developed, evaluated, and delivered technologies and aproaches that eliminate, minimize, or control high risk pollutants from multiple sectors. Delivery of the evaluative report on the Environmental Technology Verification (ETV) pilot program is delayed until FY 2002.

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

In 1999 Goal exceeded by three verifications for a total of 53 completed verification reports; 98 additional technologies in process and 202 applications pending; 65 protocols and generic test plans developed; 724 stakeholders in 15 stakeholder groups attended 32 stakeholder meetings

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Provide verification data on 50 or more technologies.	30-sep-1999					
Complete test protocols for all 12 ETV pilots will be available.		51				protocols
Verify 125 technologies (cumulative since 1996).		58				technologies

Deliver a Report to Congress on the status and effectiveness of the Environmental Technology Verification (ETV) Program during its first five years.	0		report
Complete performance evaluations of various metal finishing processes aimed at zero-discharge metal pretreatment as replacements for more hazardous processes.	1		report
Complete a capstone report summarizing current knowledge about volatile organic compounds and hazardous air pollutants emissions from paints used indoors.	1		report
Develop new process for drycleaning microelectronic wafers to decrease water usage and toxic chemicals.	0		grant report
Verify and provide information to States, technology purchasers, and the public on 40 air, water, pollution prevention and monitoring technologies for an ETV programmatic total of 230 verifications.		40	verifications
Complete an additional 10 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV, and provide them to testing organizations world-wide.		10	protocols

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Baseline: Actual environmental risk reduction is directly related to performance and effectiveness of environmental technologies purchased and used. Private sector technology developers produce almost all of the new technologies purchased in the U.S. and around the world. Purchasers and permitters of environmental technologies need an independent, objective, high quality source of performance information in order to make more informed decisions; and vendors with innovative, improved, faster, and cheaper environmental technologies need a reliable source of independent evaluation to be able to penetrate the environmental technology market In FY 02, the first year of operating, after the pilot period ended in FY 01, the Environmental Technology Verification (ETV) Program will have delivered in FY 02 more than 20 additional protocols, making them available to the entire research and testing community, and will have verified approximately 30 additional technologies for a programmatic total of 180, making data on their performance available for public use as well.

OBJECTIVE 06 : INCORPORATE INNOVATIVE APPROACHES.

Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection.

GOAL 09: A CREDIBLE DETERRENT TO POLLUTION AND GREATER COMPLIANCE WITH THE LAW

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

OBJECTIVE 01: INCREASE COMPLIANCE THROUGH ENFORCEMENT.

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

Non-Compliance Reduction

In 2003	EPA will direct enforcement actions to maximize compliance and address environmental and human health problems.
In 2001	EPA directed enforcement actions to maximize compliance and address environmental and human health problems.
In 2000	Deterred and reduced noncompliance and achieved environmental and human health improvement. 74.9% of concluded enforcement actions required environmental or human health improvement, such as pollution reduction.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Millions of pounds of pollutants required to be reduced through enforcement actions settled this fiscal year.(core optional)		714	660		300	M pounds
Establish statistically valid noncompliance rates or other indicators of noncompliance for selected environmental problems.		5				indicators
Establish baseline to measure percentage of significant violators with reocurring significant violations within 2 years of returning to compliance.		1				baseline
Establish baseline to measure average length of time for significant violators to return to compliance or enter enforceable plans/agreements		1				baseline
Produce a report on the number of civil and criminal enforcement actions initiated and concluded (core required)		1				Report
75% of concluded enforcement actions require physical action that result in pollutant reductions and/or changes in facility management or information practices. OECA will break out the %.			74		75	Percent

Develop and use valid compliance rates or other indicators of compliance for selected populations.	6	5	Populations
Reduce by 2 percentage points overall the level of significant noncompliance recidivism among CAA, CWA, and RCRA programs from FY 2000 levels	2.4		PercentagePoint
Increase by 2 percent over FY 2000 levels the proportion of significant noncomplier facilities under CAA, CWA, and RCRA which returned to compliance in less than two years. (core required)	1.33		PercentagePoint
Maintain or reduce the level of significant noncomplier recidivism under the CAA.		<=25	percent
Maintain or reduce the level of significant noncomplier recidivism under the CWA.		<=55	percent
Maintain or reduce the level of significant noncomplier recidivism under RCRA.		<=17	percent
Maintain or decrease the proportion of significant noncomplier facilities under CAA which returned to compliance in more thatn two years.		<=15	percent
Maintain or decrease the proportion of significant noncomplier facilities under CWA which returned to compliance in more than two years.		<=19	percent
Maiintain or decrease the proportion of significant noncomplier facilities under RCRA which returned to compliance in more than two years.		<=15	percent

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

Inspections/Investigations

In 2003 EPA will conduct inspections, criminal investigations, and civil investigations targeted to areas that pose risks to human health or the environment, display patterns of non-compliance, or include disproportionately exposed populations.

In 2003 EPA will provide direct investigative, forensic, and technical support to the Office of Homeland Defense, FBI and /or other federal, state and local law enforcement agencies to help detect and prevent, or respond to, terrorist-related environmental, biological or chemical incidents.

In 2001 EPA conducted inspections and civil and criminal investigations targeted to areas with patterns of non-compliance, that pose risks to human health or the environment, or incldue disproportionatley exposed populations

In 2000 Conducted 20,123 inspections, 477 criminal investigations, and 660 civil investigations, 15% of which were targeted at priority areas.

In 1999 We exceeded our goal to deter noncompliance by maintaining levels of field presence and enf. actions, particularly in high risk areas and/or where populations are disproportionately exposed. In 1999, EPA conducted 21,410 (15,000 target) inspections and undertook 3,935 (2,600 target) enf. actions.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of EPA inspections conducted (core required)		20,123	17,812		14000	inspections
Percent of inspections and investigation (civil and criminal) conducted at priority areas		15				percent
Number of Criminal Investigations		477	482		400	Investigations
Develop a list of high priority facilities in Indian country for the enforcement and compliance program.			1			list
Number of Civil Investigations		660	368		180	Investigations
Establish minimum core compliance monitoring program for selected high priority facilities in Indian country.					4	Percent
EPA will respond to investigative leads that relate to security of homeland environment, FBI requests for support, and participate in all National Special Security Events as requested.					100	percent

Baseline: The compliance monitoring program works with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. The number of inspections projected varies each year by the complexity of facilities targeted. In FY03, EPA will maintain its enforcement presence by conducting at least 14,000 inspections, 400 criminal investigations and 180 civil investigations.

Quality Assurance

In 2003 Identify noncompliance, and focus enforcement and compliance assurance on human health and environmental problems, by maintaining and improving quality and accuracy of data.

In 2001 EPa maintained and continued to improve enforcement and compliance data used to identify noncompliance and focus on human health and environmental problems.

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

In 1999 We met our goal by targeting 7 (of 5 targeted) high priority areas through the MOA process for enforcement and compliance assistance and completing 2 (of 2 targeted) baseline data assessment in major databases, AFS and DOCKET, needed to measure quality of key indicators of compliance.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Complete concept and begin design phase of General Enforcement Mgt system (GEMS)		30-Sep-2000				date
continue concept phase and begin design phase of PCS modernization		30-Sep-2000				date
Complete Phase I of Integrated Compliance Information System (ICIS) development (programming) and begin Phase II.			1			Phase
Operate 14 information systems housing national enforcement and compliance assurance data with a minimum of 95% operational efficiency.			95			Percent
Design and develop Phase II of ICIS (modernization of the Permit Compliance System (PCS)) by September 2003					1	Data System
Ensure that enf. and compl. data is reported in 14 nat. info. systems to provide Fed. and state programs accurate and timely data through which env. and human health problems can be identified.					95	efficiency

Baseline. EPA's ability to target and measure effectiveness of its enforcement activities depends upon reliable and up-to-date data systems. EPA's 14 data systems will continue to operate at 95% or better operational efficiency. In conjunction with the operation and maintenance of existing systems, EPA will continue its system modernizing efforts and improve data integration and consistency.

Capacity Building

In 2003 Improve capacity of states, localities and tribes to conduct enforcement and compliance programs. EPA will provide training as well as assistance with state and tribal inspections to build capacity, including implementation of the inspector credentials program for tribal law enforcement personnel.

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In 2001 OECA improved the capacity of states localities and tribes to conduct enforcement and compliance programs.

In 2000 Improved capacity of states, localities and tribes to conduct enforcement and compliance assurance programs. Conducted 713 EPA-assisted inspections and delivered 154 training classes/seminars to states/localities and tribes.

In 1999 We exceeded (by 135) our goal of providing specialized assistance and training courses to state and tribal officials to enhance the effectiveness of their programs.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Specialized assistance & training	218					Courses
Number of EPA-assisted inspections to build capacity		713				inspections
Conduct EPA-assisted inspections to help build state program capacity			895		250	Inspections
The National Enforcement Training Institute will train Tribal personnel.			428			personnel
Provide tribal governments with 50 computer-based training (CBT) modules.			235		50	Training module

Baseline: Improve capacity of states, localities and tribes to conduct enforcement and compliance programs by providing training as well as assistance with state and tribal inspections.

International Enforcement

In 2003 Ensure compliance with legal requirements for proper handling of hazardous waste imports and exports

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

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

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

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Import / Export Notifications	1539					Notifications
Ensure proper handling of 200,000 tons of hazardous waste exports	n/a					tons

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Track, consent to, and /or acknowledge the movement of haz.wastes into and out of the U S. to ensure proper management to protect the env. and public health and safety.		100	percent

Baseline: In FY03, EPA will review and respond to 100 percent of the notices for transboundary movement of hazardous waste, ensuring that these wastes are properly handled in accordance with international agreements and the Resource Conservation and Recovery Act regulations.

OBJECTIVE 02: PROMOTE COMPLIANCE THROUGH INCENTIVES AND ASSISTANCE.

EPA and its state, tribal, and local partners will promote the regulated community's compliance with environmental requirements through voluntary compliance incentives and assistance programs.

Compliance Incentives

In 2003 Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

In 2001 EPA increased opportunities through targeted sector initiatives for industries to use one of the self-disclosure policies

In 2000 Increased entities self-policing and self-correction of environmental problems through use of small business and small community policies.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of facilities that self-disclosed potential violations.		2,200				facilities
Facilities voluntarily self-disclose and correct violations with reduced or no penalty as a result of EPA self-disclosure policies.			1754		500	Facilities
Increase opportunities for corporate-wide voluntary self-disclosure through targeted sector initiatives.					2	initiatives

Baseline: EPA developed its Audit/Self-Policing Policy in 1995 to encourage corporate audits and subsequent correction of self-discovered violations. That Policy as well as the Small Business Compliance Policy were modified in FY00. The Agency is working to expand the use of the Audit Policy through aggressive outreach to specific sectors. In FY01 the performance measure was modified to reach settlements with 500 facilities to voluntarily self-disclose and correct violations. This same measure has been carried continued.

986

Regulated Communities

In 2003	Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides.
In 2001	EPA continued to expand the compliance assistance program for the regulated community.
In 2000	Increased the regulated community's compliance with environmental requirements through use of compliance assistance; 455,581 facilities were reached and 140 compliance assistance tools were developed.
In 1999	We met our goal of inc. use of comp. incentives and the understanding of, and ability to comply with, reg. requirements by operating 9 small bus. compl. asst. centers (meeting target), completing10 sector notebooks, guides, etc, (target 5), and conducted 22 (target 15) Fed. fac. mgt. reviews.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Compliance Assistance Centers in Operation	9					Centers
Compliance Tools Development	10					Sector Guides
Federal Facility Management Reviews	22					Reviews
Total number of facilities reached through targeted compliance assistance		455,581				facilities
Number of compliance assistance tools developed.		140				tools
EPA will complete 80% of the compliance assistance tools listed in the previous year's compliance Assistance Activity Plan.					80	Percent
50% of recipients of compliance assistance from funded assistance pilot projects will increase their understanding of environmental requirements or facility management practices. (Core optional)					50	Percent
Number of facilities, states, technical assistance providers or other entities reached through targeted compliance assistance (core optional)			550,000		475,000	Entities
Develop compliance assistance tools listed in the Compliance Assistance Plan.			203			Tools
Increase compliance assistance center usage.	36					percent

986

Number of tribally owned/managed entities reached through the Agency's targeted compliance assistance.	249	30	entities
70% of survey respondents find the Compliance Assistance Center useful to very useful in helping them understand applicable environmental regulations		70	percent
60% of servey respondents took an action, in whole or in part, due to information found through Center services or resources.		60	percent

Baseline: EPA provides clear and consistent descriptions of regulatory requirements to assure that the community can understand its obligations. EPA supports initiatives targeted toward compliance in specific industrial and commercial sectors or with certain regulatory requirements. Compliance assistance tools range from plain-language guides, fact sheets, checklists and newsletters. New distribution methods include the on-line Clearinghouse. In FY03, EPA is planning to reach 475,000 facilities, states, or technical assistance providers through targeted compliance assistance efforts.

GOAL 10: EFFECTIVE MANAGEMENT

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

OBJECTIVE 02: PROVIDE LEADERSHIP

Provide vision, national and international leadership, executive direction, and support for all Agency programs.

OBJECTIVE 03: MANAGE FOR RESULTS THROUGH SERVICES, POLICIES, AND OPERATIONS.

Demonstrate leadership in managing for results by providing the management services, administrative policies, and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities and mandates.

Strengthen EPAs Management

In 2003 Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda

In 2003 Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Number of Agency offices using the workforce planning model which identifies skills and competencies needed by the Agency for strategic recruitment, retention and developmental training.					5	Offices
Percentage of total eligible service contracting dollars obligated as performance based in FY2003					30	Percent

Baseline: Based on FY 2002 performance, baselines are: Zero for number of Agency offices using the workforce planning model; 20% for performance-based contracts, and an unqualified opinion for financial statements.

Strengthen EPAs Management

In 2003 Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda

In 2003	Strengthen EPA's management services in support of the Agency's mission while addressing the challenges included in the President's Management Agenda.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Agency audited Financial Statements are timely, and receive an unqualified opinion.					one	Finan statement

Baseline: Based on FY 2002 performance, baselines are: Zero for number of Agency offices using the workforce planning model; 20% for performance-based contracts, and an unqualified opinion for financial statements.

OBJECTIVE 03: PROVIDE QUALITY WORK ENVIRONMENT.

Effectively conduct planning and oversight for building operations and provide employees with a quality work environment that considers safety, new construction, and repairs and that promotes pollution prevention within EPA and with our state, tribal, local, and private partnerships.

Energy Consumption Reduction

In 2003	By 2003, EPA will achieve a 15% energy consumption reduction at its 21 laboratories.
In 2001	In FY 2001 the Agency completed projects which will significantly reduce energy consumption at five EPA-owned laboratories.
In 2000	EPA has implemented an aggressive strategy to reduce energy consumption in its facilities. As a result of this strategy, the Agency has reduced its total energy consumption by 19% over 1985 baseline.
In 1999	EPA continues to pursue its energy efficiency performance goals throughout its owned laboratory facilities which ensure the Agency achieves a high level of environmental, economical, and operational building safety. EPA implemented energy savings and pollution prevention techniques at 4 labs.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Improve energy efficiency and reduce energy consumption in EPA labs.	4					Labs
Energy consumption of BTUs per square foot.		304000				BTUs per Sq/Ft
Number of energy saving projects at EPA owned facilities.			5			Projects
Cumulative percentage reduction in energy consumption (from 1990).					15	Percent

989

Baseline. In FY 2000, energy consumption of British Thermal Units (BTUs) per square foot is 320,000 BTUs per square foot.

OBJECTIVE 04: PROVIDE AUDIT, EVALUATION, AND INVESTIGATIVE PRODUCTS AND SERVICES

Provide audit, evaluation, and investigative products and advisory services resulting in improved environmental quality and human health.

Fraud Detection and Deterrence

In 2003 Improve Agency management and program operations by identifying savings, recoveries , and fines equaling 150 percent of the investment in the OIG, and by preventing fraud and reducing the risk of loss through 50 criminal, civil, or administrative actions.

In 2001 We met our goal to increase our effectiveness in detecting & deterring fraud & other improprieties that undermine the integrity of Agency programs/resources. Investigations resulted in 120 judicial, administrative & other actions taken to enforce laws & reduce/avoid risk & $5 3 millions in savings.

In 2000 OIG met its goal to increase its effectiveness in detecting and deterring fraud and other improprieties by increasing the number of assistance agreement and contract cases, improving the percentage of cases referred for action, and reducing the average time for case completion.

In 1999 Office of Investigations increased its effectiveness in detecting & deterring fraud & other improprieties by increasing the number of assistance agreements & contract cases, improving the % of cases referred for action, reducing average time of case completion, & more fraud awareness briefings.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Monetary value of fines, judgments, settlements, restitutions, and savings.	$.8	70.8				Million
Judicial, administrative, and other actions taken to enforce law, reduce or avoid risk.	73	107				Actions
Percentage of cases completed resulting in referrals.		51.3				% Of Cases
Percentage of cases completed or referred within one year.		48.2				% Of Cases
Number of judicial, administrative, or other actions taken.					50	Actions
Return on the annual dollar investment in the OIG					150	Percent

Baseline: In FY 2001, the OIG will identify savings, recoveries, and fines at a baseline of $44.3 million and reduce the risk of loss through criminal, civil, or administrative actions at a baseline of 54 actions.

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Audit and Advisory Services

In 2003	Improve environmental quality and human health by recommending 75 improvements across Agency environmental goals, identifying and recommending solutions to reduce 20 of the highest environmental risks, and identifying 20 best environmental practices.
In 2001	The OIG exceeded its annual performance goals of providing timely, independent auditing and consulting services responsive to the needs of our customers that provide value to the agency and recommendations to improve program and operational performance and integrity
In 2000	OIG provided timely, independent auditing and consulting services responsive to the needs of customers/stakeholders by identifying opportunities for increased economy, efficiency, and effectiveness in achieving environmental results. OIG audit products and services are more customer and goal driven.
In 1999	The Office of Inspector General provided objective, timely, and independent auditing, consulting, and investigative services through such actions as completing 24 construction grant closeout audits.

Performance Measures	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
Potential monetary value of recommendations, questioned costs, savings and recoveries.	124.9	55.3				Million
Examples of IG recommendations/advice or actions taken to improve the economy, efficiency, and effectiveness of business practices and environmental programs.	60	78				Examples
Construction Grants Closeout Audits	24					Audits
Overall customer and stakeholder satisfaction with audit products and services (timeliness, relevancy, usefulness and responsiveness.		76				Percent
Number of environmental improvements made, reductions in environmental risks.					95	Improvements
Number of best environmental practices identified					20	Practices

Baseline: In FY 2001, the OIG will recommend improvements across the Agency environmental goals and recommend solutions to reduce the highest environmental risks at a baseline of 68 recommendations.

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Special Analysis

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ANNUAL PERFORMANCE PLAN COMPONENTS

Introduction

The Agency's approach to annual planning under the Government Performance and Results Act (GPRA) is based on a full integration of strategic planning, annual planning, budgeting, and accountability. The Agency's Annual Plan and Budget submission to OMB reflects this integration; all of the components of the Annual Plan are contained within the Budget. In addition, to fully explain the Agency's resource needs, the Budget contains a set of annual performance goals and performance measures broader than what will be included in the Annual Plan submission to Congress under GPRA. The Agency will submit a stand-alone Annual Plan to Congress to meet the legislative concern expressed in GPRA that "annual plans not be voluminous presentations describing performance...for every activity. The annual plan and reports are to inform, not overwhelm the reader."

Annual Plan Organization

The Annual Plan submission to Congress contains the following elements of the Agency's Annual Plan and Congressional Justification:

I. Goals
- Goal Statement
- Background and Context
- Means and Strategy
- External Factors
- Goal Resources

II Objectives
- Objective Statement
- Key Program Resources
- Annual Performance Goals and Performance Measures:
  - (The set of APGs included in the Annual Plan are those reported in the Budget Goal Overview. The APGs and PMs in the Annual Plan represent the most significant accomplishments planned for FY2001, and are intended to be used to evaluate the Agency's performance under GPRA.)
- Verification and Validation of Performance Measures

III. Appendix
- Customer Service Program
- Costs and Benefits of Economically Significant Rules
- Major Management Issues
- Use of Non-Federal Parties in Preparing this Annual Plan
- Relationship Between the Annual Plan and the Strategic Plan

CHARGING ADMINISTRATIVE/MANAGEMENT COSTS TO ENVIRONMENTAL GOALS

In response to Government Performance and Results Act and Managerial Cost Accounting requirements, the Agency has initiated an effort to accurately reflect all costs associated with implementing environmental goals where there is a reasonably clear benefit to that goal. Specifically, beginning in 1999 the Agency has charged management and administrative costs to environmental goals to more accurately captures the costs of supporting environmental programs. The Agency believes that this will result in more reliable information for internal and external reporting.

In the FY 2003 Annual Plan/OMB Submission, FY 2003 OMB Request, FY 2002 President's Budget and FY 2001 Enacted levels reflect a realignment of resources from Agency Management to the agency's other strategic goals where there is a readily identifiable cost that clearly contributes to the achievement of those goals.

The costs allocated across the agency's strategic goals include the entire budget for rent, utilities and security, and portions of total agency costs in the following areas: Administrative Services (human resource operations, contracts management, grants management, financial management, facility operations and information resources management); management, support and oversight; and legal services. The total amounts allocated in 2003, 2002 and 2001 are:

Dollars in Thousands	**FY 2003**	**FY 2002**	**FY 2001**
Rent, Utilities and Security	$201,932	$196,468	$184,176
Management Services and Stewardship	$111,554	$122,278	$110,675
Legal Services	$43,223	$42,114	$39,526

EPA USER FEE PROGRAM

In FY 2003, EPA will have four (4) user fee programs in operation. These user fee programs are as follows:

- **Motor Vehicle and Engine Compliance Program Fee**

  This fee is authorized by the Clean Air Act of 1990 and is managed by the Office of Air and Radiation. Fee collections began in August 1992. This fee is imposed on manufacturers of light-duty vehicles, light and heavy trucks, and motorcycles. It covers the cost of certifying new engines and vehicles and monitoring compliance of in-use engines and vehicles. In FY 2003, EPA expects to collect $11,000,000 from this fee.

- **Pesticide Tolerance Fee**

  A tolerance is the maximum legal limit of a pesticide residue in and on food commodities and animal feed. In 1954, the Federal Food, Drug, and Cosmetic Act (FFDCA) authorized the collection of fees for the establishment of tolerances on raw agricultural commodities and in food commodities. These fees supplement annual appropriated funds for EPA's Tolerance Program and are also deposited into the FIFRA Fund. Annually, the fees are adjusted by the percentage change in the Federal employee General Schedule (GS) pay scale. In FY 2003, EPA expects to replace this fee with a more comprehensive cost-recovery fee. The FFDCA, as amended by FQPA, mandates that EPA must require the payment of such fees as will, in the aggregate, be sufficient to provide, equip, and maintain an adequate service for establishing tolerances. A proposed Tolerance Fee Rule was published in FY 1999.

  This request is based on the issuance of a final tolerance fee rule on October 1, 2002 with an effective date of March 31, 2003. EPA anticipates collecting $58,000,000 in fees in FY 2003, which would provide funding for the tolerance program at current services levels. The remaining collections would be used at some future time.

- **Pre-manufacturing Notification Fee**

  Since 1989, this fee has been collected for the review and processing of new chemical Pre-Manufacturing Notifications (PMN) submitted to EPA by the chemical industry. They are paid at the time of submission of the PMN for review by EPA's Office of Prevention, Pesticides and Toxic Substances. PMN fees are authorized by the Toxic Substances Control Act and contain a cap on the amount the Agency may charge for a PMN review. EPA expects to collect $1,800,000 in PMN fees in FY 2003 under the existing fee structure. The removal of the statutory fee cap is discussed below under User Fee Proposals.

- **Lead Accreditation and Certification Fee**

  The Toxic Substances Control Act, Title IV, Section 402(a)(3), mandates the development of a schedule of fees for persons operating lead training programs accredited under the 402/404 rule and for lead-based paint contractors certified under this rule. The training programs ensure that lead paint abatement is done safely. Fees collected for this activity are deposited in the U.S. Treasury. EPA estimates that less than $500,000 will be deposited in FY 2002 and FY 2003. Deposits should increase to up to $800,000 in FY 2004 because many individuals will need to recertify and many training program providers will be applying for new or additional accreditation.

User Fee Proposals

- **Removal of the Statutory Cap on the Pre-manufacturing Notification Fee**

  The Agency is proposing authorizing and appropriations language to remove the statutory cap on the existing Pre-Manufacturing Notification (PMN) fees to allow EPA to cover the full cost of the PMN program. The authorizing language would remove the current statutory cap in the Toxic Substances Control Act on the total fee that EPA is allowed to charge. The fee change would be subject to an appropriations language trigger that would allow the fees to be counted as discretionary. Under the current fee structure, the Agency will collect $1,800,000 in FY 2003. The increase in PMN fees will be deposited into a special fund in the U.S. Treasury, available to the Agency, subject to appropriation. In FY 2003, after the anticipated rulemaking, the Agency estimates collections of an additional $4,000,000.

EPA's CUSTOMER SERVICE PROGRAM

Background

EPA's Customer Service Program (CSP) has been actively promoting the provision of citizen centered services and products to all our external and internal customers since 1993. The Agency is committed to providing the highest quality service possible to the American people and to achieving the Bush Administration's goal of making all aspects of the Executive Branch's management practices and operations equal to or better than the best service in the private sector.

The CSP staff, who coordinate and support all aspects of the Program, are located in the Office of Policy, Economics and Innovation within the Office of the Administrator. Directly, or through contractors, the staff supports EPA's Customer Service Steering Committee (CSSC), the group that sets CSP policy, its 11 work and process groups, and customer service coordinators across the Agency; coordinates an annual national customer service conference in partnership with a regional host and/or Federal partners; develops and disseminates training and measurement support tools and techniques; and gathers and shares best practices and success stories to speed adoption of customer service innovations. By involving approximately 400 individuals from staff and management through CSSC workgroups and office/region/laboratory Customer Service Councils, the CSP leverages its three-person staff to implement the Agency's Customer Service Strategy.

EPA considers the American people to be its number one customer. As we enforce laws and administer our many non-regulatory programs, we must understand and be responsive to their legitimate expectations. Being prompt and predictable, knowledgeable and responsive to customers' needs, flexible where appropriate, and unfailingly considerate and courteous, enables EPA to work as a better partner and to produce better environmental results. Customer service does not take the place of intelligent program strategies; rather, it is an integral part of every strategy.

What Improved Customer Service Will Achieve

Agency Strategy and Plans:

Late in 1998, the CSSC adopted a Customer Service Program Strategy that focuses on:

1. helping all EPA employees understand the importance and substantial mission-related benefits of improving service to the public and each other;
2. providing employees with goals (standards) and guidelines for improvement and involving them in identifying and attempting to eliminate barriers to achieving customer service excellence;
3. providing training to build staff capacity to achieve the standards and effectively apply customer service skills, and building a culture that encourages learning;
4. developing tools and building capacity to gather formal and informal feedback and measure customer satisfaction (service, product and process improvement) over time;

5. learning what we need to do to increase satisfaction with our services and our treatment of customers; and,
6. recognizing and rewarding customer service excellence.

Since October 2000, twenty-two offices and regions have been implementing their plans for building world class customer service across the Agency. CSP staff is tracking progress and providing assistance to program offices. The main elements of the plans follow.

- Vision/Leadership - Establish a clear vision of how providing outstanding customer service fits into the Agency's mission and a method to communicate this picture of the future throughout the organization.

7. Feedback/Measurement - Formally assess and document the satisfaction of key external and/or internal customers, make appropriate changes as a result, and develop objective measures to track progress.

8. Sharing/Benchmarking - Investigate, discover and implement practices from the best public and private sector service leaders.

9. Accountability/Recognition - Hold everyone responsible for providing service excellence and recognize outstanding efforts.

10. Personal Development - Provide opportunities for as many people as possible to attend at least one customer service workshop.

Standards:

Implementing the plans will enable the Agency to better achieve EPA's Six Principles of Customer Service and enhance implementation of the Agency's overall Customer Service Strategy. The Six Principles are:

11. Be helpful! Listen to your customers!
12. Respond to all phone calls by the end of the next business day.
13. Respond to all correspondence within 10 business days.
14. Make clear, timely, accurate information accessible.
15. Work collaboratively with partners to improve all products and services.
16. Seek and use customers' ideas and input!

In addition to the Six Principles, EPA has specific service standards for its core processes of permitting; rule making, state, local and tribal grants; pesticides regulation; public access (correspondence, telephone, and electronic); research grants, and partnerships. All standards are posted on the CSP web site [http://www.epa.gov/customerservice/standards.htm] along with a section on what to expect from EPA when they are customers of these processes [http://www.epa.gov/customerservice/principles.htm].

The Permits Core Process group developed a document, the "Customer Service in Permitting Tool Kit" [http://www.epa.gov/customerservice/permits/] to assist EPA and its partners in permitting, and began distribution in 2000. With regional sponsors and participation from the states, the CSP launched full day workshops using the Tool Kit to focus on key attributes of permitting services and practical ways to obtain and use customer feedback to improve permitting.

Feedback and Measurement:

Because customer satisfaction measurement is central to the CSP, staff developed "Hearing the Voice of the Customer - Customer Feedback and Customer Satisfaction Measurement Guidelines" [http://www.epa.gov/customerservice//feedback/voice.htm] in 1998. The CSP sponsors workshops to train advisors/consultants to assist people across the Agency to use the Guidelines to obtain and use customer input. CSP staff and these advisors assist other staff to prepare surveys that they can endorse and send to EPA's liaison to the Office of Management and Budget (OMB).

All feedback instruments are cleared through OMB under the CSP generic Information Collection Request (ICR) for customer satisfaction surveys. A renewal of that clearance will be prepared during FY 2003 to extend the ICR beyond the current March 2003 expiration date. During 2001, with CSP staff assistance, the Office of Environmental Information launched an OMB-approved standardized web site survey and began encouraging web site managers to use that survey instrument to learn from their users what and how to improve their Internet web pages. The CSP also encourages organizations to establish systems to document complaints and comments, track responses, and make improvements.

EPA offices annually sponsor many surveys and focus group sessions with outside customers. Most survey instruments are developed independently by staff, managers and contractors for different programs. Some of these feedback activities are accomplished quickly and efficiently, but many are not. The CSP initiated a project in 2001 to gather and consolidate survey information from across the Agency on an intranet site. This will enable programs that are inexperienced in effective feedback to learn from more experienced programs. It will also give offices that have not performed surveys information that may help them focus their activities more effectively.

The CSP staff coordinated EPA's participation in the American Customer Satisfaction Index (ASCI) Survey. To examine the customer service aspects of the information provision part of its mission, EPA chose to focus on Internet users because web pages are representative of all EPA programs, the Internet is becoming increasingly more accessible to the general public (in 1999, 50% of the public; five years prior, only 30%), and increasing public access to environmental information is a strategic goal of the Agency. Using the results of the ASCI and the many follow-up surveys, focus groups, and usability testing performed to clarify findings, the Agency continually makes changes to improve its websites.

Training/Conferences:

Over 200 EPA staff are certified to facilitate training across the Agency. Many have delivered "Forging the Links" (an EPA-specific workshop that ties service improvement to better mission performance) and customer skills courses [http://www.epa/customerservice/training.htm]. Through sharing benchmarking and best practices information and by convening the only government sponsored annual customer service conference, the CSP supplements training opportunities. Optional training workshops follow each annual conference. The conferences showcase outstanding speakers, excellent trainers and best-in-class service deliverers. They bring together EPA, Federal, state and local government employees and managers to share information that speeds adoption of best practices. [http://www.epa.gov/customerservice/conference.htm]

Each year, the conference has served to advance customer service innovation within EPA. As it expanded to include additional Federal, state and local agencies and their service contractors, the conference has served to speed innovation far beyond EPA. Conference themes have included: delivering citizen centered government, measuring customer satisfaction and acting on customer feedback, being accountable to customers, recognizing excellence, partnering for better service delivery, and using technology (e-gov) to improve access and services. Staff members from EPA and its co-sponsors record all sessions and gather all presentations. The CSP staff develop conference proceedings and post the compiled notes and papers on the customer service website to further extend the effectiveness of the conferences. [http://www.epa.gov/customerservice/conference.htm]

Recognition:

Through recognizing outstanding service, the Agency highlights, encourages, and reinforces service excellence. Many offices and regions in EPA have created specific cash awards for customer service. In addition, many non-monetary awards are in place to encourage improvements in correspondence and telephone service to the public. Administrator Whitman presented the first Honor Awards for excellence in customer service in 2001.

Expected Results

In FY 2003, the Agency will continue to implement its customer service strategy. The expected results follow:

17. policy and guidance will better integrate customer service excellence with achieving EPA's mission;
18. communications and liaison with senior managers and other Federal and state partners will assure consistent and rapid follow-up;
19. best practices research and benchmarking assistance will lead to continued improvements in processes, products and services;
20. direct CSP staff assistance and contractual support to workgroups, program and regional offices will speed implementation of customer service plans;

21. customer service and related training opportunities will increase the customer focus of the Agency;
22. continuous support for feedback and measurement activities will prevent duplicative surveys and speed survey clearances;
23. a sixth National Customer Service Conference will enable EPA and its partners to meet, share, and learn from top performing agencies and companies how to apply their knowledge to improve customer service;
24. increased access to CSP information via the Intra- and Internet and a gateway to other customer service information will enable more people to understand the benefits of world class customer service; and
25. service excellence will be a core value at EPA.

FTE: 3.0
Funding: $300,000 (salaries/benefits) $150,000 (contract request)

FY 2002 REVISED FINAL ANNUAL PLAN

As in the case of the past three Annual Plans, EPA has opted to prepare a Revised Final Annual Plan for FY 2002. The primary purpose of the revised plan is to update annual performance goals and targets using FY 2001 performance data and reflecting Congressional action on EPA's portion of the FY 2002 President's Budget. The FY 2002 Final Annual Plan was included in the Agency's FY 2002 budget request which was released in April of 2001, approximately six months prior to the beginning of FY 2002.

The FY 2002 Annual Plan included well over 500 annual performance goals (APGs) and annual performance measures (PMs). The Agency has been criticized for its large number of APGs/PMs. As part of the development of the FY 2003 Annual Plan, EPA undertook a concerted effort to improve the quality and reduce the number of externally-reported APGs and PMs. As a result of this effort to create a smaller, more meaningful set of goals and measures EPA has determined that there are important performance results that should be captured in the narrative section of this document but do not necessarily warrant a separate APG or PM. In most cases, EPA will continue to use these goals and measures for internal management purposes. EPA has also determined that some of these changes should also be made for the corresponding FY 2002 APGs and PMs. As such, a number of the changes reflected in the FY 2002 Revised Final Annual Plan are not included in the main body of this document.

Listed below are the FY 2002 APGs and PMs that were not in ten strategic goal chapters of the FY 2003 Annual Plan/Congressional Justification but were included in the Agency's FY 2002 Annual Plan. These APGs/PMs will also be referenced in the Agency's FY 2002 Annual Report:

Notes:

- The goals and measures listed as "Former Goals" represent those goals and measures as they existed in the FY 2002 Annual Plan.
- The goals and measures listed as "Revised Goals" represent those goals and measures as they currently exist.
- The strikeouts (indicated by a line through the text) listed in the "Former Goals" section indicate that language was deleted from the goal or measure.
- The bold (indicated by darkened text) listed in the "Former Goals" section indicate that revised language was added to the goal or measure.

GOAL 5: Safe Waste Management

OBJ 1. (OECA)

Former Goal: Maximize all aspects of potentially responsible party (PRP) participation including having PRPs initiate work at 70% of the new construction starts at non-Federal Facility Superfund sites, and emphasize fairness in the settlement process.

Performance Measure: Ensure fairness by making orphan share offers at 100% of all eligible settlement negotiations for response work.
Target: 100%

Performance Measure: Provide finality for small contributors by entering into *de minimis* settlements and report the number of settlers.
Target: 18%

Revised Goal: Reclassify performance measures as reporting (internal).

Explanation: This APG no longer needs to be highlighted with these PMs. The need to emphasize fairness in the Superfund enforcement is now routine. Orphan share offers are routinely made at all eligible sites, and de minimis settlements are entered into with small contributors as appropriate. These measures are no longer necessary to highlight routine activities.

OBJ 1. (OECA)

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

Performance Measure: Evaluate liability concerns - 100% of PPA requests addressed up to a maximum of 40 requests.
Target: 100%

Explanation: The new Brownfields legislation, the Small Business Liability Relief and Brownfields Revitalization Act, reduces the need for prospective purchaser agreements and comfort letters. It provides liability protection for prospective purchasers, contiguous property owners, and innocent landowners among other hindrances to brownfields cleanup. EPA will continue to pursue liability concerns as needed.

Goal 6: Global Change

OBJ 2. (OAR)

Former Goal: Demonstrate technology for an 85 MPG mid-size family sedan that has low emissions and is safe, practical, and affordable.

Performance Measures: Fuel Efficiency of EPA-Developed PNGV Concept Vehicle over EPA Driving Cycles Tested

Revised Goal: This goal will be permanently dropped beginning in FY 2002.

Performance Measures: This measure will be permanently dropped beginning in FY 2002.

Explanation: The Administration has eliminated the PNGV program for FY 2003. As a result, our FY 2002 work has been recharacterized to lead into what the Administration has asked us to do in FY 2003. In FY 2002, EPA will continue work under two CRADA partnerships with private industry to transfer passenger car technology to SUV and urban delivery vehicles. Given this, we have crafted a new APG for FY 2003 that describes the EPA goal relative to the CRADA partnerships.

OBJ 2. (OAR)

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

OBJ 2. (OAR)

Former Goal: Provide analysis, assessment, and reporting support to Administration officials, the Intergovernmental Panel on Climate Change, and the Framework Convention on Climate Change.

OBJ 2. (OAR)

Former Goal: In close cooperation with USDA, identify and assess opportunities to sequester carbon in agricultural soils, forests, other vegetation and commercial products, with collateral benefits for productivity and the environment, with carbon removal potential of up to 25 MMTCE by 2010.

OBJ 3. (OAR)

Former Goal: Increase the number of children participating in the SunWise School Program by 25%, and reduce the rate of sunburns among participants by 5%.

HOMELAND SECURITY

Introduction

EPA played a critical role in responding to the September 11, 2001, attacks at the World Trade Center in New York City and the Pentagon. At the World Trade Center, the Agency aided in debris removal from Ground Zero, combined efforts with Occupational Health and Safety Administration and the New York City Department of Health to monitor worker exposure to contaminated dust and particulate matter, and coordinated with the New York City Department of Environmental Protection to sample drinking water and ambient air quality. Similar monitoring efforts were conducted at the Pentagon crash site. At the Senate Hart Office Building in Washington, D.C., EPA worked with the Sergeant at Arms, who served as the lead, during the Anthrax decontamination process, which was successfully completed in January 2002.

EPA recognizes that establishing comprehensive homeland security does not end with the conclusion of cleanup efforts in New York and Washington, DC. In FY 2002 and FY 2003 the Agency will be investing over $300 million for preparedness and response activities.

FY 2001/2002 Immediate Response

Immediately following the September 11, 2001 attack at the World Trade Center (WTC) in New York City, EPA entered into the first in a series of Mission Assignments with the Federal Emergency Management Agency (FEMA) for response work at Ground Zero. By the end of December, the Mission Assignments totaled $42.6 million. Subsequent to December 31, FEMA transferred an additional $52.7 million to EPA via Inter-Agency Agreements to continue the work through mid-2002, making the total amount $95.3 million. EPA's assignments included:

- Implementation of personnel and equipment decontamination operations for thousands of on-site workers;
- Conducting continuous air and water sampling in and around the WTC site;
- Conducting asbestos sampling, radiological monitoring and waste categorization monitoring at the Staten Island Landfill;
- Vacuum cleaning of sidewalks, streets, and buildings in the WTC area.

These operations have been continually maintained since September 11, 2001, under the overall management of Region 2's Superfund response program and supported by the East Coast Environmental Response Team, as well as staff and management from EPA's other nine Regional offices.

EPA criminal investigators also assisted the FBI and other local and Federal law enforcement organizations at the WTC site. Agency staff aided in the collection of crime scene evidence, photographic documentation, and related investigative duties.

At the Pentagon crash site, EPA emergency responders worked with the FBI and the Department of Defense from September 11 through September 29, 2001 to collect air, water, and

debris samples to ensure the safety of response personnel, Pentagon employees, and nearby residents. The Agency's air monitoring did not detect any pollutants from the fires and building debris. EPA sampling also indicated that there was no threat of drinking water contamination. EPA criminal investigator staff provided the FBI with crime scene investigative support in the areas of body recovery, evidence collection, and assistance at the morgue.

EPA's homeland security emergency response efforts entered a new phase in October 2001, beginning with the discovery of Anthrax in Florida. The Agency responded to private sites, the U.S. Postal Service (USPS) and, other government agency sites, and the Capitol Hill complex. The Superfund emergency response program has provided the personnel, equipment and contractors to provide assessment, technical assistance and remediation services according to the needs of each site. Through the end of January 2002, EPA has obligated over $20 million for Anthrax cleanup at the Capitol Hill complex.

EPA's criminal investigations program provided direct investigative and forensic assistance to the FBI, Capitol Police, Sergeant at Arms, Senate Director of Security, and the Senate Select Intelligence Committee. Activities included documenting and gathering crime scene evidence, removing suspected contaminated mail from several Capitol Hill facilities, examining mail to obtain additional evidence, and environmental sampling of hot zones on the 5th and 6th floors of the Hart Building and several other location. EPA's criminal program is continuing to provide criminal investigative and technical support to the FBI's Joint Terrorism Task Forces and the Attorney General's Anti-Terrorism Task Forces across the country.

FY 2002 Emergency Supplemental Appropriation

The 2002 Emergency Supplemental Appropriations Act provided $175.6 million to EPA. The Agency allocated these resources to address the most important priorities, described below.

In the President's request to Congress, following the attacks on the World Trade Center and the Pentagon, the security of Federal facilities was highlighted as an imperative issue. A total of $30 million was provided to assess the security needs at EPA buildings and laboratories and mitigate those to the extent possible. Investments include, but are not limited to: additional contract guards, cameras, X-ray machines, blast resistant glass, closed circuit TVs, locks, and motorized gates.

The nation's water supply is one of our most vital natural resources. Potential threats to this resource include contamination with biological, chemical, or radiological agents; destruction of physical infrastructure; and disruption of electrical and computer systems. EPA will invest $88.8 million to support enhancement of security at the nation's drinking water systems. $79.8 million will be used to direct grants to the largest drinking water systems to carry out vulnerability systems and enhance emergency response plans, to provide technical assistance on vulnerability assessments and emergency response plans to small and medium drinking water systems, and to further refine security-related detection, monitoring, and treatment tools. In FY 2002 EPA will invest $4 million in accelerating the development and testing of counter terrorism tools, supporting training for the development of vulnerability assessments, providing technical

assistance, and conducting research on redesign and detection of collection and treatment systems, and testing and implementation of this research. In addition, the Agency will provide $5 million to the states to support homeland security coordination work in conjunction with EPA and drinking water utilities to implement homeland security activities. EPA will also develop tools and training for medium and small drinking water utilities to assess vulnerabilities and develop appropriate emergency response plans.

Any major terrorist incident, whether involving explosives, conventional hazardous materials or radiological, chemical or biological agents necessitates an EPA response. This includes first assessing the risks to public health, the environment, and response workers; second, managing and mitigating the hazards of residual contamination; and third, conducting assessments of the adequacy of the response sufficient to allay the concerns of the public who will re-occupy the affected area. The ability to effectively execute these tasks is crucial in providing homeland security. Creating a West Coast Environmental Response Team (ERT) will enable the Agency to respond more rapidly to an event beyond the immediate reach of EPA's current dedicated response team based in New Jersey. The Agency will also use Supplemental resources to enhance preparedness and response effectiveness within each EPA Regional office, fortify the East Coast ERT, and increase Headquarters support. Specific investments include equipment (breathing apparatus, chemical agent monitors, field analytical and communications equipment, etc.); training and exercises for EPA responders and On-Scene Coordinators; participation in inter-agency events with the Federal Bureau of Investigation (FBI), FEMA, and others; pre-deployment of security at national events, such as the 2002 Winter Olympics and IMF/World Bank meetings; and coordination with states and local communities to include homeland security preparedness in their emergency planning programs.

EPA worked to clean up the Hart Senate Office Building from anthrax contamination, while also assisting at the Brentwood facility in Washington, DC and the AMI building in Florida. Staff provided direct investigative and forensic assistance to the FBI and Capitol Police, bringing the Agency's subject matter expertise to bear on the gathering of potential crime scene evidence; removal and examination of suspected contaminated mail from several Capitol Hill facilities; and environmental sampling of hot zones in the Hart Building. The 2002 Emergency Supplemental Appropriation Act provided resources for EPA's cleanup efforts, as well as funds to hire and train additional criminal investigators.

The 2002 Emergency Supplemental Appropriation Act also provides funds to initiate research and development activities in support of homeland security needs. With these resources EPA will develop a unique pathological suite at its Cincinnati lab capable of sampling and evaluating Anthrax and other biological agents. In addition, EPA will use these resources to evaluate the performance of drinking water treatment systems for their ability to cost effectively remove inactivate biological and chemical warfare agents. Finally, these increased resources will provide scientifically based data to assist in selecting effective technologies to destroy chemical and biological contaminants on surfaces and in buildings.

At present, there are no registered pesticide products for killing anthrax. Accordingly, EPA expects an upsurge in requests to market new antimicrobial products many of which much

be tested on an expedited basis for homeland defense. To prepare for such reviews, EPA will be focusing on chemicals that can combat other microbes, both professional decontamination products and some

clinical/household disinfectants that may be effective against multiple biological terrorism threats. The Agency will be reviewing requests to market new anthrax and other microbe-killing pesticides.

EPA will deal with potential homeland security problems from misuse of industrial chemicals, by accelerating work in detecting and analyzing the impact of potential threats from exposure to toxic industrial chemicals. Additional information needed to determine the risks to human health from short-term exposures to acutely toxic chemicals will be developed, and subsequently disseminated through the 50 State Emergency Response Commissions (SERCs) to more than 3,500 Local Emergency Planning Committees (LEPCs).

Preserving and protecting the quality of air is a critical aspect of ensuring homeland security. EPA's monitoring efforts at the World Trade Center site illustrate the importance of monitoring ambient air and indoor air. Resources will be used to: purchase field equipment that enables the Agency to screen for contamination, collect samples, ensure protection of response personnel, and inform the public. In addition, EPA will invest in mobile assets, such as sample preparation trailers, mobile radioanalytical labs, and liquid scintillation counters. The Agency will provide training to new laboratory and headquarters support personnel and facilitate coordination efforts with other agencies.

The attacks of September 11, 2001, directly affected EPA personnel in the New York area. Information technology and communication equipment in the Agency's downtown Manhattan office was destroyed or damaged; the building was closed for several weeks; and staff were relocated to an EPA facility in Edison, New Jersey. A portion of the Supplemental Appropriation will be used to reimburse costs of replacing and maintaining equipment at this location. With regards to public access and environmental information, EPA will use resources to provide environmental updates on environmental data to the Agency's web-site regarding cleanup efforts at the World Trade Center.

FY 2003 President's Request

The President's FY 2003 request includes $19 million to continue security upgrades of EPA facilities and maintain the increased contract guards that were initiated with funds from the 2002 Emergency Supplemental Appropriation. This investment sustains the Administration's commitment in preserving a safe and healthy work environment for all Federal employees.

Building on its 2002 investments, the Agency's requests $16.9 million to conduct additional drinking water vulnerability assessments for small and medium-sized systems, and $5 million in grants to states to support homeland security coordination.

EPA will continue to operate the West Coast ERT in FY 2003. The President's request includes $5.5 million for the maintenance of this program. An additional $7.7 million is also being requested to upgrade EPA response capabilities.

In FY 2003, EPA is investing $3.8 million for special agents who will provide environmental crimes expertise to the FBI's Joint Terrorism Task Forces and the Department of Justice's Anti-Terrorism Task Forces. Personnel will also form five National Counter Terrorism Response Teams to coordinate with FBI field offices, perform protection duty services for the Administrator's Office, and proved on-site investigative support for designated National Security Special Events. Additionally, experts at the National Enforcement Investigations Center will respond with technical support in the event of a hazardous chemical release intended to threaten homeland security.

One of EPA's ten goals is to provide the public with quality environmental information. In FY 2003, the Agency will invest $0.5 million to enhance outreach and ensure that the American people are kept informed on the issues of homeland security and the environment.

The FY 2003 President's Budget requests an additional $75 million to conduct research on better technologies and assessments to cleanup buildings contaminated by biological and chemical agents. These efforts will include the transfer of technologies and guidance on decontamination processes, evaluation of existing and new cleanup and detection technologies, development of risk assessment methodologies, and production of rapid decontamination techniques and technologies. The incidents in Florida, New York, and Washington, DC illustrate the potential use of biological and chemical agents as deadly weapons. Through these research efforts, EPA will work to achieve a higher degree of preparedness which will strengthen Federal response efforts.

U.S. Environmental Protection Agency

FY 2002/2003 HOMELAND SECURITY SUMMARY

(Dollars in thousands)

Goal Objective Appropriation	FY 2002 Base Resource Declarations	FY 2002 FTE	FY 2002 Supplemental Resources	FY 2002 Supplemental FTE	FY 2003 Base Resource Request	FY 2003 President's Budget Investments	FY Buc Fl
Clean Air	**$874.0**	**9.2**	**$600.0**	**0.0**	**$0.0**	**$0.0**	
Attain NAAQS	$520.5	6 9	$600.0	0 0	$0 0	$0 0	
EPM	$0 0	0 0	$600 0	0 0	$0 0	$0 0	
S&T	$520.5	6.9	$0.0	0.0	$0.0	$0 0	
Reduce Air Toxics Risk	$353 5	2 3	$0.0	0 0	$0 0	$0.0	
S&T	$353.5	2.3	$0.0	0.0	$0.0	$0 0	
Clean and Safe Water	**$3,764.1**	**12.0**	**$88,794.0**	**10.0**	**$1,946.5**	**$20,000.0**	
Safe Drinking Water	$3.264.1	12 0	$87.794 0	10.0	$1,946 5	$20,000 0	
S&T	$3.264 1	12 0	$82,794 0	10.0	$1,946.5	$15,000.0	
STAG	$0 0	0 0	$5,000 0	0.0	$0.0	$5,000 0	
Reduce Loadings	$500.0	0 0	$1,000 0	0 0	$0 0	$0.0	
EPM	$500 0	0 0	$1,000 0	0 0	$0.0	$0 0	
Safe Food	**$14.0**	**0.2**	**$1,465.4**	**2.7**	**$0.0**	**$0.0**	
Reduce Risk	$0.0	0 0	$602 6	1 4	$0.0	$0 0	

EPM	$0 0	0 0	$602 6	1 4	$0.0	$0 0
Eliminate Use on Food	$14.0	0.2	$862 8	1.3	$0 0	$0 0
EPM	$0 0	0 0	$862 8	1.3	$0.0	$0 0
S&T	$14 0	0.2	$0 0	0 0	$0 0	$0.0
Preventing Pollution	**$0.0**	**0.0**	**$1,734.6**	**3.3**	**$0.0**	**$0.0**
Reduce Public and	$0 0	0.0	$482.4	2 0	$0 0	$0 0
EPM	$0 0	0 0	$482.4	2.0	$0 0	$0 0
Reduce Risks from Lead	$0.0	0 0	$150 0	0 0	$0 0	$0.0
EPM	$0.0	0 0	$150 0	0 0	$0 0	$0.0
Manage New Chemical	$0 0	0 0	$1,102 2	1 3	$0 0	$0 0
EPM	$0 0	0 0	$1,102.2	1 3	$0 0	$0 0
Better Waste Management	**$3,192.4**	**12.1**	**$42,300.0**	**80.0**	**$3,185.4**	**$83,125.0**
Control Risks	$3,185 4	12 0	$42,300.0	80.0	$3,185.4	$83,125 0
EPM	$0 0	0 0	$3,300 0	5 0	$0.0	$0.0
Superfund	$3,185 4	12 0	$39,000.0	75.0	$3,185 4	$83,125 0
Regulate Facilities	$7 0	0 1	$0 0	0 0	$0 0	$0 0
S&T	$7 0	0 1	$0 0	0 0	$0 0	$0.0
Quality Environmental Info	**$607.8**	**5.0**	**$2,181.5**	**6.0**	**$473.3**	**$0.0**
Increase Availability	$600 8	4 9	$0.0	0 0	$473 3	$0.0
EPM	$600 8	4 9	$0.0	0.0	$473.3	$0.0
Provide Access	$7.0	0 1	$253 1	3.0	$0 0	$0 0
EPM	$0.0	0 0	$253 1	3 0	$0 0	$0 0
S&T	$7 0	0.1	$0.0	0.0	$0.0	$0.0

Improve Agency Info	$0.0	0.0	$1,928 4	3.0	$0 0	$0.0
EPM	$0 0	0.0	$1,028 4	3 0	$0.0	$0 0
Superfund	$0 0	0 0	$900.0	0.0	$0.0	$0.0
Sound Science	**$579.6**	**5.0**	**$1,474.0**	**2.0**	**$0.0**	**$1,875.0**
Conduct Research	$65 5	0 9	$0 0	0.0	$0.0	$0 0
S&T	$65.5	0.9	$0 0	0.0	$0.0	$0 0
Improve Scientific Basis	$360 1	1.9	$0 0	0.0	$0 0	$0 0
S&T	$360 1	1.9	$0.0	0.0	$0 0	$0 0
Enhance Capabilities	$147.0	2 1	$1,440 6	2 0	$0 0	$0 0
S&T	$147.0	2 1	$1,440 6	2.0	$0.0	$0 0
Improve Environmental	$7 0	0 1	$33.4	0.0	$0 0	$1,875 0
S&T	$7.0	0 1	$33.4	0.0	$0 0	$0 0
Superfund	$0 0	0 0	$0 0	0 0	$0.0	$1,875.0
Credible Deterrent	**$3,457.3**	**30.0**	**$7,010.5**	**50.0**	**$3,807.0**	**$0.0**
Increase Compliance	$2,715 5	24 0	$7,010 5	50.0	$3,807.0	$0 0
EPM	$2,715.5	24 0	$5,618 5	40.0	$3,036 3	$0 0
Superfund	$0 0	0 0	$1,392.0	10 0	$770.7	$0.0
Promote Compliance	$741 8	6 0	$0.0	0 0	$0 0	$0 0
Superfund	$741 8	6 0	$0.0	0 0	$0 0	$0.0
Effective Management	**$0.0**	**0.0**	**$30,040.0**	**3.0**	**$0.0**	**$19,000.0**
Provide Quality Work Env.	$0 0	0.0	$30,040 0	3.0	$0.0	$19,000 0
EPM	$0.0	0 0	$24,000.0	3.0	$0.0	$6,000 0
S&T	$0 0	0 0	$6,040 0	0 0	$0.0	$1,500.0

B&F	$0 0	0.0	$0.0	0.0	$0.0	$11,500 0
	$12,489.2	**73.5**	**$175,600.0**	**157.0**	**$9,412.2**	**$124,000.0**

Note. Table does not include FEMA reimbursable resources

Environmental Protection Agency

FY 2003 Annual Performance Plan and Congressional Justification

Key Programs
(Dollars in Thousands)

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
ATSDR Superfund Support	EPM	$0 0	$654.3	$0.0
Acid Rain--CASTNet	S&T	$3,991.2	$3,991.2	$3,991 2
Acid Rain -Program Implementation	EPM	$12,248 7	$12,500.2	$12,790 4
Administrative Law	EPM	$2,567 3	$2,684 0	$2,869.8
Administrative Services	EPM	$15,520.3	$0 0	$0 0
Administrative Services	SUPERFUND	$14,211.8	$0.0	$0.0
Administrative Services	*Total*	*$29.732 1*	*$0 0*	*$0 0*
Air Toxics Research	S&T	$19,077.0	$18,923 4	$19,883 7
Air,State,Local and Tribal Assistance Grants Other Air Grants	STAG	$227,724.5	$240,724.5	$240,724 5
American Indian Environmental Office	EPM	$10,014.8	$9,911.6	$10,219 7
Assessments	SUPERFUND	$79,417 5	$76,472.9	$76,236 3
Assistance Agreement Audits	IG	$1,631.7	$1,500,0	$0 0
Assistance Agreement Audits	IG SFUND XFER	$1,855 9	$0 0	$0 0
Assistance Agreement Audits	Superfund-IG	$0 0	$500.0	$0.0
Assistance Agreement Audits	*Total*	*$3,487 6*	*$2,000.0*	*$0 0*
Assistance Agreement Investigations	IG	$793 6	$1,885 0	$0 0
Assistance Agreement Investigations	Superfund-IG	$0 0	$1,015.0	$0.0
Assistance Agreement Investigations	*Total*	*$793 6*	*$2,900.0*	*$0 0*
Beach Grants	STAG	$0 0	$10,000 0	$10,000.0
Brownfields	EPM	$2,634 9	$2,819.2	$29,500.0
Brownfields	STAG	$0 0	$0 0	$170,500 0
Brownfields	SUPERFUND	$89,905.4	$94,813 5	$0 0
Brownfields	*Total*	*$92,540.3*	*$97.632.7*	*$200,000.0*
Capacity Building	EPM	$9,917.1	$9,511.1	$10,543.4
Capacity Building	S&T	$162.5	$169 6	$175 9
Capacity Building	SUPERFUND	$1,611.1	$1,075.5	$1,368.5
Capacity Building	*Total*	*$11,690 7*	*$10,756 2*	*$12,087.8*
Carbon Monoxide	EPM	$3,879.8	$3,964.3	$3,834.3
Carbon Monoxide	S&T	$182.5	$294 1	$190 8
Carbon Monoxide	*Total*	*$4,062.3*	*$4,258 4*	*$4,025.1*
Chesapeake Bay	EPM	$20,728 0	$20,551.8	$20,650.8
Children's Indoor Environments	EPM	$14,714.1	$13,287.9	$13,918.4

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Childrens Health, Program Development and Coordination	EPM	$6,036 9	$6,099.0	$6,670.9
Civil Enforcement	EPM	$95,752.3	$95,090 8	$93,182 4
Civil Enforcement	Oil Spill	$1,264 7	$1,512 0	$1,538 6
Civil Enforcement	S&T	$2,979.4	$2,669 1	$2,739.0
Civil Enforcement	SUPERFUND	$4,085.3	$4,289 5	$4,379 5
Civil Enforcement	*Total*	*$101,081.7*	*$103,561.4*	*$101,839 5*
Civil Rights/Title VI Compliance	EPM	$9,140 1	$11,143 6	$11,770 7
Climate Change Research	S&T	$22,550 4	$21,350.5	$21,729 3
Climate Protection Program Buildings	EPM	$52,535 0	$48,571.3	$49,820.5
Climate Protection Program: Carbon Removal	EPM	$997.8	$1,549 7	$1,576.3
Climate Protection Program Industry	EPM	$31,929 6	$25,368.6	$25,673.1
Climate Protection Program: International Capacity Building	EPM	$5,501 7	$6,982 8	$7,086 5
Climate Protection Program State and Local Climate Change Program	EPM	$2,494 5	$2,245 6	$2,275.2
Climate Protection Program: Transportation	EPM	$2,494.5	$4,404 8	$4,447.9
Climate Protection Program Transportation	S&T	$26,940.6	$26,425.9	$17,119 3
Climate Protection Program Transportation	*Total*	*$29,435 1*	*$30,830 7*	*$21,567.2*
Coastal Environmental Monitoring	S&T	$7,467.5	$7,325 3	$7,671.2
Commission for Environmental Cooperation - CEC	EPM	$3,269 0	$3,396 4	$3,535 3
Common Sense Initiative	EPM	$1,781 1	$1,838.7	$0 0
Communicating Research Information	ORD SFUND XFER	$138.3	$160 7	$0 0
Communicating Research Information	S&T	$5,817 3	$5,383 0	$5,408 9
Communicating Research Information	SFUND RESEAR	$0 0	$0.0	$160 7
Communicating Research Information	*Total*	*$5,955.6*	*$5,543 7*	*$5,569 6*
Community Assistance	EPM	$4 174.5	$1,124 6	$1,428.9
Community Right to Know (Title III)	EPM	$4,861 1	$4,968.4	$4,953 1
Compliance Assistance and Centers	EPM	$25,097.8	$25,735 4	$25,106.7
Compliance Assistance and Centers	LUST	$656.4	$670 0	$689.8
Compliance Assistance and Centers	Oil Spill	$267.9	$264 8	$271 4
Compliance Assistance and Centers	*Total*	*$26,022.1*	*$26,670.2*	*$26,067.9*
Compliance Incentives	EPM	$10,093.3	$9,512.0	$9,344 6
Compliance Incentives	SUPERFUND	$394.4	$583.3	$345.3
Compliance Incentives	*Total*	*$10,487 7*	*$10,095 3*	*$9,689 9*
Compliance Monitoring	EPM	$54,166.5	$50,572 2	$48,487 0
Compliance Monitoring	S&T	$2,614.7	$2,644 1	$2,711 4
Compliance Monitoring	*Total*	*$56,781 2*	*$53,216.3*	*$51,198 4*

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Congressional Projects	EPM	$1,979 2	$2,078 6	$1,991.3
Congressional/Legislative Analysis	EPM	$4,357 6	$4,852.2	$4,857 8
Congressionally Mandated Projects	EPM	$102,581 9	$85,223 6	$0 0
Congressionally Mandated Projects	S&T	$49,785 1	$58,977 0	$0 0
Congressionally Mandated Projects	STAG	$353,650.4	$343,900.0	$0.0
Congressionally Mandated Projects	*Total*	*$506.017 4*	*$488,100 6*	*$0.0*
Contract Audits	IG	$4,165.3	$3,900.0	$0 0
Contract Audits	IG SFUND XFER	$860 1	$0 0	$0 0
Contract Audits	Superfund-IG	$0 0	$1,300 0	$0 0
Contract Audits	*Total*	*$5.025.4*	*$5,200 0*	*$0 0*
Contract and Procurement Investigations	IG	$510.1	$2,325 0	$0 0
Contract and Procurement Investigations	Superfund-IG	$0 0	$775 0	$0 0
Contract and Procurement Investigations	*Total*	*$510 1*	*$3,100 0*	*$0 0*
Correspondence Coordination	EPM	$2,658 6	$1.200.7	$1,096 3
Criminal Enforcement	EPM	$25,669.0	$26,321.3	$26,855 3
Criminal Enforcement	S&T	$5,095 8	$5,465.8	$5,643 2
Criminal Enforcement	SUPERFUND	$10,075.3	$9,768.6	$10,039 6
Criminal Enforcement	*Total*	*$40,840.1*	*$41 555.7*	*$42,538 1*
Data Collection	EPM	$6,451 4	$103.1	$125.9
Data Collection	SUPERFUND	$393.4	$22.8	$0 0
Data Collection	*Total*	*$6,844.8*	*$125 9*	*$125 9*
Data Management	EPM	$16,680 7	$17,247 6	$17,768.6
Data Management	SUPERFUND	$1.262 7	$1,223 0	$1,234 2
Data Management	*Total*	*$17.943.4*	*$18 470 6*	*$19,002.8*
Data Standards	EPM	$3.165 6	$1.512 9	$2,510.3
Data Standards	S&T	$3,032 9	$3,563.2	$3,633 8
Data Standards	SUPERFUND	$647 8	$263.8	$336.5
Data Standards	*Total*	*$6.846.3*	*$5,339.9*	*$6,480.6*
Design for the Environment	EPM	$4,965.6	$4,707 6	$4,810.7
Direct Public Information and Assistance	EPM	$10,431.0	$8,612.7	$8,998 4
Disadvantaged Communities	EPM	$4,309.6	$4.350 8	$4,481 3
Drinking Water Implementation	EPM	$35,058.0	$38,332.9	$38,935 0
Drinking Water Regulations	EPM	$33,585.6	$25,908.9	$27,241.4
Drinking Water Regulations	S&T	$2,595.5	$2,688 5	$2,792.6
Drinking Water Regulations	*Total*	*$36,181 1*	*$28,597 4*	*$30,034.0*
EMPACT	EPM	$7,782.8	$0 0	$0.0
EMPACT	S&T	$5,986.8	$0.0	$0 0
EMPACT	*Total*	*$13.769 6*	*$0 0*	*$0 0*
Ecosystems Condition, Protection and	S&T	$101,267 3	$104,492.9	$105,795 0

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Restoration Research				
Effluent Guidelines	EPM	$23,354 1	$22,773.4	$23,010 3
Employee Integrity Investigations	IG	$325 8	$750 0	$0 0
Employee Integrity Investigations	Superfund-IG	$0 0	$250 0	$0 0
Employee Integrity Investigations	*Total*	*$325 8*	*$1,000.0*	*$0 0*
Endocrine Disruptor Research	S&T	$12,849 4	$10,722.4	$12,178 7
Endocrine Disruptor Screening Program	EPM	$10,128 5	$8,952.4	$9,063 5
Enforcement Training	EPM	$4,236 7	$3,230 3	$3,145 4
Enforcement Training	SUPERFUND	$1,041.0	$717.0	$735 0
Enforcement Training	*Total*	*$5 277 7*	*$3,947.3*	*$3,880 4*
Environment and Trade	EPM	$1,700 0	$1,672.6	$1,844 3
Environmental Appeals Boards	EPM	$1,553 1	$1,667 3	$1,737 7
Environmental Education Division	EPM	$9,003 4	$9,160 2	$0 0
Environmental Finance Center Grants (EFC)	EPM	$1,249 0	$2,000 0	$2,000 0
Environmental Justice	EPM	$4,148 5	$4,164 4	$4,078 8
Environmental Justice	SUPERFUND	$997.8	$900.0	$900 0
Environmental Justice	*Total*	*$5,146 3*	*$5.064 4*	*$4,978 8*
Environmental Monitoring and Assessment Program, EMAP	S&T	$29.613.7	$32,426.0	$38,259 6
Environmental Technology Verification (ETV)	S&T	$6,294 0	$3.607.7	$3,617 6
Executive Support	EPM	$2,835 7	$3,113.0	$3,121 2
Existing Chemical Data, Screening, Testing and Management	EPM	$24,522.4	$28,286 4	$28,331.9
Facilities Infrastructure and Operations	B & F	$23,878.4	$25,318.0	$31,418.0
Facilities Infrastructure and Operations	EPM	$270,069 3	$280,850.7	$279.773.2
Facilities Infrastructure and Operations	LUST	$847 3	$841.5	$824.7
Facilities Infrastructure and Operations	Oil Spill	$517 6	$454.1	$451 9
Facilities Infrastructure and Operations	S&T	$21,405 7	$17,409.9	$8,539 0
Facilities Infrastructure and Operations	SUPERFUND	$55,444.3	$57,507.1	$55,357.0
Facilities Infrastructure and Operations	*Total*	*$372,162 6*	*$382,381.3*	*$376,363.8*
Federal Facilities	SUPERFUND	$30,622.0	$31,206 5	$31,915.5
Federal Facility IAGs	SUPERFUND	$8.455 1	$8,784.7	$9,091.7
Federal Preparedness	SUPERFUND	$9,728 2	$9,849.3	$9,883.0
Financial Statement Audits	IG	$3,250 3	$3,000.0	$0 0
Financial Statement Audits	IG SFUND XFER	$749 7	$0.0	$0 0
Financial Statement Audits	Superfund-IG	$0 0	$1,000 0	$0 0
Financial Statement Audits	*Total*	*$4,000 0*	*$4,000.0*	*$0 0*
Fish Contamination/Consumption	EPM	$3,188 4	$2,764 8	$2,788 4
GLOBE	EPM	$997 8	$0 0	$0 0
Geospatial	EPM	$522 3	$983 2	$743 4

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Geospatial	SUPERFUND	$0.0	$32.1	$0 0
Geospatial	*Total*	*$522 3*	*$1.015.3*	*$743.4*
Global Toxics	EPM	$1,579.3	$1,522 8	$1,415.1
Global Trade Issues for Pesticides and Chemicals	EPM	$2,703 7	$3,091 2	$3,125 4
Grants to States for Lead Risk Reduction	STAG	$13,682 0	$13,682.0	$13,682 0
Great Lakes	EPM	$3,114 4	$3,208.6	$2,684 7
Great Lakes National Program Office	EPM	$15,266 3	$14,929.7	$15,128 2
Gulf of Mexico	EPM	$4,341.2	$4,261.6	$4,327.4
Hazardous Air Pollutants	EPM	$49,407 8	$48,130.9	$48,687.2
Hazardous Air Pollutants	S&T	$3,882 4	$4,094.4	$3,935.2
Hazardous Air Pollutants	*Total*	*$53,290 2*	*$52,225.3*	*$52,622 4*
Hazardous Substance Research:Hazardous Substance Research Centers	ORD SFUND XFER	$2,282 6	$2,331.7	$0 0
Hazardous Substance Research Hazardous Substance Research Centers	SFUND RESEAR	$0 0	$0 0	$2,354 1
Hazardous Substance Research Hazardous Substance Research Centers	SUPERFUND	$2,245.1	$2,245 1	$2,245 1
Hazardous Substance Research Hazardous Substance Research Centers	*Total*	*$4,527.7*	*$4.576.8*	*$4.599.2*
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	ORD SFUND XFER	$6,554 0	$6,501 0	$0 0
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	SFUND RESEAR	$0 0	$0 0	$6,545 0
Hazardous Substance Research Superfund Innovative Technology Evaluation (SITE)	*Total*	*$6,554 0*	*$6.501 0*	*$6,545 0*
Hazardous Waste Research	S&T	$6,990.0	$9,088.3	$9,548 7
Homeland Security	B & F	$0 0	$0.0	$11,500.0
Homeland Security	EPM	$0.0	$3,816.3	$9,509.6
Homeland Security	HOMELAND SECURITY	$0 0	$170,600 0	$0 0
Homeland Security	S&T	$1,963.2	$4,745 7	$18,446 5
Homeland Security	SFUND RESEAR	$0.0	$0.0	$75,000.0
Homeland Security	SUPERFUND	$3,194 0	$3.927.2	$13,956.1
Homeland Security	*Total*	*$5,157.2*	*$183.089.2*	*$128,412.2*
Homestake Mine	STAG	$0.0	$0 0	$8,000.0
Human Health Research	S&T	$49,825.7	$47.225.6	$51,824.5
Immediate Office of the Administrator	EPM	$3,994.1	$3,175.9	$4,343.7
Indoor Environments	EPM	$8,579.3	$9,036.7	$8,978 1
Indoor Environments	S&T	$662 6	$329.5	$329 5
Indoor Environments	*Total*	*$9.241 9*	*$9.366.2*	*$9.307.6*
Information Exchange Network	STAG	$0.0	$25,000.0	$25,000 0
Information Integration	EPM	$5,860.2	$5,783.6	$17,057.0

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Information Integration	SUPERFUND	$0.0	$332 5	$3,100 0
Information Integration	*Total*	*$5,860.2*	*$6,116 1*	*$20,157 0*
Information Technology Management	EPM	$27,394.4	$25,291.0	$25,544 4
Information Technology Management	S&T	$187.0	$0 0	$0.0
Information Technology Management	SUPERFUND	$3,212.4	$3,230 4	$2,537 9
Information Technology Management	*Total*	*$30,793.8*	*$28,521.4*	*$28,082.3*
Intergovernmental Relations - OA	EPM	$3,111.2	$3,687 2	$4,128 1
International Safe Drinking Water	EPM	$384 4	$0 0	$0.0
Investigations	IG	$0.0	$0.0	$6,959.4
Investigations	Superfund-IG	$0.0	$0 0	$2,510 2
Investigations	*Total*	*$0 0*	*$0 0*	*$9 469 6*
LUST Cleanup Programs	LUST	$10,055 4	$10,067.4	$10,285.4
Lake Champlain	EPM	$1,995 6	$2,500.0	$954 8
Lead	EPM	$329.5	$342.2	$339 6
Lead Risk Reduction Program	EPM	$14,214.3	$13,092.6	$13,166 3
Leaking Underground Storage Tanks (LUST)Cooperative Agreements	LUST	$58,341 3	$59,331.9	$58,341.2
Legal Services	EPM	$38,594.5	$41,783.6	$45,458.2
Legal Services	SUPERFUND	$810 9	$819.5	$844.5
Legal Services	*Total*	*$39,405.4*	*$42,603.1*	*$46,302 7*
Long Island Sound	EPM	$4,989 0	$2,500.0	$477.4
Management Services and Stewardship	EPM	$87,515 4	$96,334 8	$107,290 8
Management Services and Stewardship	LUST	$368 2	$486.1	$518 3
Management Services and Stewardship	Oil Spill	$36.2	$44.7	$53 2
Management Services and Stewardship	S&T	$129.5	$176.8	$198.7
Management Services and Stewardship	SUPERFUND	$27,142 3	$40,115.1	$41,245.0
Management Services and Stewardship	*Total*	*$115,161.6*	*$137,157.5*	*$149,306 0*
Marine Pollution	EPM	$8,198.5	$7,994.8	$8,170 7
Multi_Media Communications	EPM	$0 0	$821.3	$870 3
Multilateral Fund	EPM	$10,975 8	$9,575.8	$9,575 8
NACEPT Support	EPM	$1,560.6	$1,803.1	$1,670.1
NAFTA Implementation	EPM	$403.3	$514.3	$747.9
NEPA Implementation	EPM	$11,081 4	$11,507.5	$11,785 8
NPDES Program	EPM	$40,961 5	$40,991.0	$41,720.8
National Association Liaison	EPM	$235.5	$346 0	$262.5
National Estuaries Program/Coastal Watersheds	EPM	$20,151.9	$24,521.3	$19,246.2
National Nonpoint Source Program Implementation	EPM	$16.644.6	$16,488.6	$16,908 6
National Program chemicals: PCBs, Asbestos, Fibers,and Dioxin	EPM	$6,103.8	$6,775.5	$6,994 5
New Chemical Review	EPM	$14,224 5	$14,088.8	$14,730.2

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Nitrogen Oxides	EPM	$1,379 4	$1,525 5	$1,399 0
Oil Spills Preparedness, Prevention and Response	Oil Spill	$11,948 9	$11,795 4	$12,332 2
Other Federal Agency Superfund Support	SUPERFUND	$10,676.5	$10,676.0	$10,676.0
Ozone	EPM	$32,322 5	$32,783 9	$34,763.6
Ozone	S&T	$35,783 8	$35,671 2	$42,735.2
Ozone	*Total*	*$68,106 3*	*$68,455 1*	*$77,498.8*
PBTI	EPM	$2,455.1	$2,572.5	$2,580 5
POPs Implementation	EPM	$0.0	$0.0	$680.3
PWSS - Homeland Security	STAG	$0.0	$5,000 0	$5,000.0
Pacific Northwest	EPM	$1,078 6	$1,003 8	$1,028 5
Particulate Matter	EPM	$32,466 9	$29,561.0	$32,118 5
Particulate Matter	S&T	$23,150.4	$22,741.7	$30,505.8
Particulate Matter	*Total*	*$55,617.3*	*$52,302 7*	*$62,624.3*
Particulate Matter Research	S&T	$65,457.3	$65,468 2	$66,662.0
Partnerships to Reduce High Risk Pesticide Use	EPM	$11,851 9	$10,407.0	$12,279.8
Performance Track	EPM	$1,995 6	$1,834 6	$1.834 6
Pesticide Registration	EPM	$39,813 2	$41,005 9	$39,981 5
Pesticide Registration	S&T	$2,069.2	$2,006 8	$2,138 7
Pesticide Registration	*Total*	*$41,882 4*	*$43,012.7*	*$42,120 2*
Pesticide Reregistration	EPM	$33,844 6	$35,218.6	$45,993.2
Pesticide Reregistration	S&T	$2,110.0	$2,364.7	$2,377 9
Pesticide Reregistration	*Total*	*$35,954 6*	*$37,583.3*	*$48 371 1*
Pesticide Residue Tolerance Reassessments	EPM	$14,656 3	$14,671.8	$5,267 9
Pesticide Residue Tolerance Reassessments	S&T	$137 2	$0.0	$0 0
Pesticide Residue Tolerance Reassessments	*Total*	*$14 793 5*	*$14,671 8*	*$5.267 9*
Pesticides Program Implementation Grant	STAG	$13.085.5	$13.085.5	$13,085.5
Planning and Resource Management	EPM	$34.630 0	$38,560.2	$43,857.8
Planning and Resource Management	LUST	$907 0	$772.3	$813.9
Planning and Resource Management	SUPERFUND	$12.056 5	$16,962.8	$18,119 4
Planning and Resource Management	*Total*	*$47.593.5*	*$56.295.3*	*$62.791.1*
Planning, Analysis, and Results - IG	IG	$7,916 1	$4,609.0	$0.0
Planning, Analysis, and Results - IG	IG SFUND XFER	$1,547.2	$0 0	$0.0
Planning, Analysis, and Results - IG	Superfund-IG	$0.0	$1,677 0	$0 0
Planning, Analysis, and Results - IG	*Total*	*$9,463 3*	*$6.286.0*	*$0 0*
Pollution Prevention Incentive Grants to States	STAG	$5,986.3	$5,986 3	$5,986 3
Pollution Prevention Program	EPM	$10,066.4	$9.597.8	$9,902.8
Preventing Contamination of Drinking Water Sources	EPM	$22,424 7	$23,470.2	$22,096 8
Program Audits'	IG	$4,148 9	$3.675 0	$0.0

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Program Audits	IG SFUND XFER	$2,030 1	$0.0	$0.0
Program Audits	Superfund-IG	$0.0	$1,225 0	$0 0
Program Audits	*Total*	*$6,179 0*	*$4,900.0*	*$0.0*
Program Evaluation - IG	IG	$10,877 2	$11,250.0	$0 0
Program Evaluation - IG	IG SFUND XFER	$4,431.7	$0 0	$0.0
Program Evaluation - IG	Superfund-IG	$0.0	$3,750 0	$0 0
Program Evaluation - IG	*Total*	*$15,308 9*	*$15,000.0*	*$0.0*
Program Evaluations/Audit	IG	$0.0	$0 0	$28,365.6
Program Evaluations/Audit	Superfund-IG	$0.0	$0.0	$10,231 8
Program Evaluations/Audit	*Total*	*$0 0*	*$0 0*	*$38,597.4*
Program Integrity Investigations	IG	$400.0	$1,125 0	$0 0
Program Integrity Investigations	Superfund-IG	$0 0	$375 0	$0.0
Program Integrity Investigations	*Total*	*$400.0*	*$1,500.0*	*$0.0*
Project XL	EPM	$3,075.3	$0.0	$0 0
Public Access	EPM	$10.265 4	$12,931.2	$14,068 3
Public Access	S&T	$577 9	$279 3	$324 8
Public Access	SUPERFUND	$691 6	$703 8	$1,176 3
Public Access	*Total*	*$11,534 9*	*$13,914.3*	*$15,569 4*
RCRA Corrective Action	EPM	$41,150 9	$38,262.3	$38,965.2
RCRA Enforcement State Grants	STAG	$43,127 6	$42,904 7	$42,904 7
RCRA Improved Waste Management	EPM	$62,477 7	$61,174.6	$61,860.0
RCRA State Grants	STAG	$63,236 0	$63,458 9	$63,458 9
RCRA Waste Reduction	EPM	$11,689 0	$14,633 7	$13,740 7
Radiation	EPM	$14,124 1	$13,897.5	$14,253.5
Radiation	S&T	$5,200.1	$5,546 2	$5,931.3
Radiation	SUPERFUND	$2,064 1	$2,180 3	$2,234.3
Radiation	*Total*	*$21,388 3*	*$21,624 0*	*$22,419 1*
Radon	EPM	$4,945 7	$5,095 7	$5,095 7
Radon	S&T	$1,277 0	$1,357.3	$1,398.2
Radon	*Total*	*$6,222 7*	*$6,453 0*	*$6,493 9*
Recreational Water and Wet Weather Flows Research	S&T	$5,926 4	$5,635 8	$5,496.6
Regional Geographic Program	EPM	$8,192 3	$7,609.2	$8,651.1
Regional Haze	EPM	$2,305 9	$2,535.9	$2,408 1
Regional Haze	*Total*	*$2,305 9*	*$2,535.9*	*$2,408.1*
Regional Management	EPM	$33,146 5	$32,104.4	$32,476 8
Regional Management	LUST	$104.3	$143.7	$143 7
Regional Management	Oil Spill	$24.9	$23 8	$23.8
Regional Management	SUPERFUND	$8,617 6	$8,485.0	$8,577.2

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Regional Management	*Total*	*$41,893.3*	*$40,756.9*	*$41,221.5*
Regional Operations and Liaison	EPM	$428.3	$547 5	$477.6
Regional Program Infrastructure	EPM	$4,712.1	$4,604 6	$4,604.6
Regional Program Infrastructure	LUST	$40.0	$0.0	$0.0
Regional Program Infrastructure	SUPERFUND	$1,425.0	$1,527 6	$1,427.5
Regional Program Infrastructure	*Total*	*$6,177 1*	*$6,132 2*	*$6,032 1*
Regional Science and Technology	EPM	$3,850.3	$3,574 9	$3,601 8
Regional and Global Environmental Policy Development	EPM	$2,697 8	$2,362.7	$2,046.8
Regulatory Development	EPM	$23,418 4	$27,412 1	$36,381 5
Reinventing Environmental Information (REI)	EPM	$0.0	$7,812.1	$7,542.8
Reinventing Environmental Information (REI)	S&T	$0.0	$33 5	$0.0
Reinventing Environmental Information (REI)	SUPERFUND	$0 0	$778.2	$357 2
Reinventing Environmental Information (REI)	*Total*	*$0 0*	*$8,623.8*	*$7,900 0*
Research to Support Contaminated Sites	LUST	$617 5	$687 1	$696 0
Research to Support Contaminated Sites	ORD SFUND XFER	$26,464 6	$27,304 6	$0 0
Research to Support Contaminated Sites	Oil Spill	$936 8	$905 2	$909 9
Research to Support Contaminated Sites	S&T	$2,647.6	$1,000 0	$0 0
Research to Support Contaminated Sites	SFUND RESEAR	$0.0	$0 0	$26,515.2
Research to Support Contaminated Sites	*Total*	*$30,666 5*	*$29,896.9*	*$28,121 1*
Research to Support Emerging Issues	S&T	$23,365 6	$28,658.5	$29,150 8
Research to Support FQPA	S&T	$12,120.0	$12,594 4	$12,042 3
Research to Support Pollution Prevention	ORD SFUND XFER	$980 2	$593 0	$0.0
Research to Support Pollution Prevention	S&T	$38,176 3	$37,079.9	$43,482 4
Research to Support Pollution Prevention	SFUND RESEAR	$0 0	$0 0	$593 0
Research to Support Pollution Prevention	*Total*	*$39,156.5*	*$37,672.9*	*$44,075 4*
Research to Support Safe Communities	S&T	$20,093 7	$21,593.6	$25,149.6
Risk Management Plans	EPM	$8,005 5	$7,202.9	$7,446 0
SBREFA	EPM	$571 9	$686 2	$608 8
STAR Fellowships Program	S&T	$9,704 3	$9,748.7	$0.0
Safe Drinking Water Research	S&T	$47,784.7	$45,579.5	$49,491 0
Safe Pesticide Applications	EPM	$10,135.4	$11,157.2	$10,193 9
Safe Pesticide Applications	S&T	$0.0	$25 0	$0 0
Safe Pesticide Applications	*Total*	*$10,135.4*	*$11,182.2*	*$10,193 9*
Safe Recreational Waters	EPM	$917.9	$834 4	$842 7
Science Advisory Board	EPM	$2,775.1	$2,887.8	$3,352 5

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Science Coordination and Policy	EPM	$275.8	$492.2	$950 1
Sector Grants	STAG	$2,209 3	$2,209.3	$2,209 3
Small Business Ombudsman	EPM	$3,000.9	$3,049 1	$3.124 0
Small, Minority, Women-Owned Business Assistance	EPM	$2,048.2	$2,295 5	$3,305 0
South Florida/Everglades	EPM	$2,942.0	$2,648 3	$2,665 5
State Multimedia Enforcement Grants	STAG	$0 0	$0 0	$15.000.0
State Nonpoint Source Grants	STAG	$237,476.8	$237,476 8	$238,476 8
State PWSS Grants	STAG	$93,100 2	$93,100 2	$93,100.2
State Pesticides Enforcement Grants	STAG	$19,867.8	$19,867 8	$19,867.8
State Pollution Control Grants (Section 106)	STAG	$171,883 3	$192,476 9	$180,376.9
State Toxics Enforcement Grants	STAG	$5,138.9	$5,138.9	$5,138.9
State Underground Injection Control Grants	STAG	$10,950.9	$10,950 9	$10,950 9
State Water Quality Cooperative Agreements	STAG	$18,958.2	$18,958.2	$38,958 2
State Wetlands Program Grants	STAG	$14,967 0	$14,967 0	$14,967 0
Stratospheric Ozone Protection	EPM	$5,771.9	$5,602 7	$5,642 2
Sulfur Dioxide	EPM	$12,158 1	$12,318 5	$13,624 7
Superfund - Cost Recovery	SUPERFUND	$29,495.5	$29,477.5	$30,375.9
Superfund - Justice Support	SUPERFUND	$28,437.3	$28,150.0	$28,150.0
Superfund - Maximize PRP Involvement (including reforms)	SUPERFUND	$82,193.9	$81,701 1	$84,396 9
Superfund Remedial Actions	SUPERFUND	$498,286 4	$488,951 3	$493,646.5
Superfund Removal Actions	SUPERFUND	$198,973.0	$202,654.0	$202,610.3
System Modernization	EPM	$12,163 6	$12.875 0	$12,210 0
System Modernization	SUPERFUND	$1.496 4	$815 0	$1,480 0
System Modernization	*Total*	*$13,660 0*	*$13,690.0*	*$13.690 0*
TMDLs	EPM	$20,594 5	$21,232.1	$21,433 2
Technical Cooperation with Industrial and Developing Countries	EPM	$4,162.2	$4,478.4	$4,330 1
Toxic Release Inventory / Right-to-Know (RtK)	EPM	$14,105 6	$14,155.6	$15,293.2
Tribal General Assistance Grants	STAG	$52,469 7	$52,469.7	$57,469 7
Tropospheric Ozone Research	S&T	$6,551.0	$6,514.8	$6,758 1
U.S. - Mexico Border	EPM	$4,384.2	$4,149.5	$5,364.6
UST State Grants	STAG	$11,918.4	$11,918.4	$11,918.4
Underground Storage Tanks (UST)	EPM	$7,045 8	$6,795.7	$7,026.4
Wastewater Management/Tech Innovations	EPM	$9,055.0	$8,840.1	$9,073.7
Water Infrastructure, Alaska Native Villages	STAG	$34,923.0	$40,000.0	$40,000.0
Water Infrastructure:Bristol County	STAG	$1.935 7	$0.0	$0 0
Water Infrastructure:Clean Water State Revolving Fund (CW-SRF)	STAG	$1,347,030.0	$1,350,000 0	$1.212,000.0
Water Infrastructure:Drinking Water State Revolving Fund (DW-SRF)	STAG	$823,185.0	$850,000.0	$850,000.0

Key Program	Approp.	FY 2001 Enacted	FY 2002 Enacted	FY 2003 Request
Water Infrastructure:Mexico Border	STAG	$74,835.0	$75,000 0	$75,000.0
Water Quality Criteria and Standards	EPM	$19,515.2	$18,782 4	$19,127.2
Water Quality Infrastructure Protection	EPM	$16,704 3	$16,783 7	$17.239 3
Water Quality Monitoring and Assessment	EPM	$11,811.0	$11.665.1	$11,967.7
Watershed Assistance	EPM	$8,467.8	$7,821.6	$9,479 1
Web Products Quality Control	EPM	$0 0	$879.5	$767 0
Wetlands	EPM	$17,651.0	$17,829.8	$18,381 9

MAJOR MANAGEMENT CHALLENGES

Introduction

One of the most critical challenges facing federal managers today is preserving the public's trust in the integrity of government programs. EPA is strongly committed to achieving its goals and objectives in a manner that maintains this integrity. Over the past several years EPA senior managers have placed a high priority on strengthening results-based management and overall accountability and on improving the efficiency and effectiveness of environmental programs. The Agency uses a system of internal program reviews, independent reviews, and audits by the General Accounting Office (GAO) and EPA's Office of the Inspector General (OIG); program evaluations; and performance measurements to ensure that program activities are effectively carried out in accordance with applicable laws and sound management policy and to provide reasonable assurance that Agency resources are protected against fraud, waste, abuse, and mismanagement.

Over the next several years EPA faces a number of management challenges, including the government-wide initiatives identified in the President's Management Agenda; the government-wide high-risk areas and major management challenges identified by GAO in its January 2001 update to their Performance and Accountability Series reports to Congress, as well as issues identified by EPA's OIG. Information is provided below on efforts underway to address these issues and other critical management challenges facing the Agency.

Protecting Infrastructure from Nontraditional Attacks

Presidential Decision Directive (PDD) 63, initiated in May 1998, assigned EPA as the designated Lead Agency and Sector Liaison for the Nation's water systems. To meet the requirements of PDD 63, EPA needs to work with private sector representatives to complete a national framework for protecting the critical infrastructure of the Nation's water systems from terrorist attack, conduct vulnerability assessments and risk mitigation, and implement a Vulnerability Awareness and Education Program for the water sector. EPA's OIG identified this issue as a management challenge in FY 2002.

The Agency is playing a significant role in protecting the public from terrorist attempts to endanger drinking water supplies and wastewater systems. Agency activities in FY 2000 and 2001 were designed to initiate development of the materials, tools, and training needed for drinking water systems to conduct vulnerability assessments and to begin development of a secure Information Sharing and Analysis Center (ISAC), which will allow drinking water utilities to share threat information with the Federal Bureau of Investigation and other utilities. In response to the terrorist attacks of September 11, 2001, the Agency established a Water Protection Task Force with a staff working full-time on implementing PDD 63 and other related activities. In FY 2002 the Agency will continue the development of ISAC, test and modify the vulnerability assessment tool, support the implementation of vulnerability assessments by the 360 largest public water systems nationwide, develop and disseminate guidance for emergency response plans, and train water system operators in the application of vulnerability assessments and remedial plans. These activities are being funded through $83 million in an FY 2002 supplemental appropriation for EPA. In addition, the Agency will make grants to states to support homeland security coordination work with EPA and drinking water utilities to implement counterterrorism activities.

Linking Mission and Management

EPA's OIG believes the Agency needs to improve its planning, measuring, and accountability by involving its partners in goal and priority setting, linking output and outcome measures of results to its goals, and accounting for the costs of achieving those results. In addition, EPA needs to accumulate, report, link, and use environmental information on activities and outcomes as a basis for determining environmental return on investment, sound resource decisions, and accountability to the public. EPA's OIG declared linking mission and management as a management challenge in FY 2002, combining previous management challenges on accountability and managerial accounting.

EPA has made significant progress over the past year in linking the management of the Agency's resources to its mission and environmental and human health results. EPA involved its state partners in the annual planning and budgeting process by considering state priorities along with EPA headquarters and regional priorities, and consulting with the states at appropriate times during the budget development and appropriations process. The Agency also developed more outcome-oriented annual performance goals and measures. In August 2001 the Office of the Chief Financial Officer (OCFO) awarded contractor support to program offices for projects geared specifically toward improving annual performance goals and performance measures. In addition, EPA's FY 2002 Final Annual Performance Plan, issued in August 2001, includes 6 percent more outcome-based goals than the final FY 2000 Plan. The Agency also improved its annual report to make it more relevant to Agency decision makers. EPA's *Fiscal Year 2001 Annual Report* focuses on environmental outcomes and demonstrates how Agency activities produce meaningful results and contribute to the health and well-being of the public.

In June 2001 EPA formed the Managing for Improved Results Steering Group, composed of senior leaders from across the Agency. The Steering Group will make recommendations on short- and long-term reforms to EPA's strategic planning, priority-setting, budgeting, and accountability structures and processes to identify potential improvements and to develop a change strategy that will operate on two fronts: (1) identify options for significant, far-reaching reforms to national processes and systems, and (2) pursue incremental changes and smaller-scale improvements that can be implemented immediately. In spring 2002 this group will present the Deputy Administrator with options for improving EPA's results-based management processes.

In addition, EPA continued its outreach efforts to inform Agency managers on the benefits and uses of cost information, and worked with individual program offices to develop further cost accounting applications to enhance program management. The Agency met specific program needs in such diverse areas as user fees, Superfund cost recovery and the Working Capital Fund (WCF).

OCFO developed cost accounting reports to better manage critical activities and programs. For example, the Agency now produces Cost by Output, Superfund Site Specific, Superfund Remedial Action, and WCF Revenue and Expense reports. Many of these reports bring together financial, administrative, and program information from different systems and reports. This was made possible through the OCFO's financial data warehouse and reporting tools which integrate portions of "mixed" administrative management systems (e.g., grants and contracts data) with the core financial system. As a result of this integration, the Agency has expanded the range of cost information available to program managers and is better able to support decision-making based on costs and results. OCFO is continuing to partner with Agency offices to meet current needs and identify future applications.

The Agency recognizes that challenges remain in better linking assessments of program performance with resource decisions, and in identifying goals and measures that better reflect its state partners' goals and priorities and will allow for trends analyses over time. However, EPA made significant progress in FY 2001 and will continue to work diligently toward improving its ability to link its mission and management.

Human Capital Strategy Implementation

EPA must devote considerable attention to building a workforce with the highly specialized skills and knowledge required to accomplish the Agency's work or risk seriously weakening its ability to fulfill even the most basic of its legal, regulatory, and fiduciary responsibilities. With its Human Capital Strategic Plan in place, the Agency has a blueprint for the initial and long-term steps needed to begin addressing this impending weakness. In FY 1998–2002 OIG identified employee competencies as a management challenge, and in FY 2000-2001 GAO identified human capital as a management challenge and a government-wide high risk area. EPA implemented a corrective action strategy and declared human capital strategy implementation as an internal Agency weakness in FY 2000.

EPA developed a comprehensive approach for investing in and managing the Agency's human resources and during FY 2001 began to aggressively implement Investing in Our People: EPA's Strategy for Human Capital, 2001–2003. Specific accomplishments in FY 2001 include (1) graduating the second class of interns and hiring a fourth class; (2) launching the Senior Executive Service (SES) Candidate Development Program, with 50 candidates to be selected for the program in 2002; (3) developing and launching a new course for supervisors and managers that new supervisors will be required to take within the first 90 days of becoming a supervisor; and (4) beginning the rollout of five courses created as part of the Mid-Level Development Program. Completion of corrective actions is expected by FY 2003.

Information System Security

The availability and reliability of environmental information is dependant on the security of the technology platform on which it resides. OIG and GAO reviews and audits have determined that EPA's security program needs considerable improvement. Specifically, OIG audits identified that EPA needs to complete risk assessments on critical information systems and to develop a centralized security program with strong oversight processes to adequately address risks and ensure that valuable information technology (IT) resources and environmental data are secure. Audit tests of computer-based controls concluded that the computer operating systems and the Agency-wide computer network systems that support most of EPA's mission-related and financial operations had significant security weaknesses. At risk was the possible unauthorized access, use, modification, destruction, or denial of service of EPA information resources that could result from exploitation of vulnerabilities. OIG identified EPA's information system security as a management challenge in FY 1997-2002. GAO identified it as a major management challenge in FY 2000-2001. EPA declared information systems security plans as a material weakness in FY 1997 and revised the weakness in FY 2000 to be more comprehensive.

EPA has made substantial improvements in strengthening its information security program by instituting a comprehensive strategy that addresses all security-related deficiencies. Corrective actions include improving the Agency's risk assessment and planning process, implementing major new technical and procedural controls, issuing new policies, and beginning a regular process of testing and evaluation. During FY 2001 EPA completed risk assessments for security-critical applications and systems, conducted training and awareness activities for information security officers and senior managers, and provided general awareness training for all Agency employees. In addition, EPA installed network intrusion-detection and monitoring controls on its centrally managed environment and plans to install additional tools on its distributed systems environment. All corrective actions are expected to be completed by the end of FY 2002.

Data Management Practices

EPA needs to improve the management, comprehensiveness, consistency, reliability, and accuracy of its data to help better measure performance and achieve environmental results. In addition, the Agency needs to develop error detection processes to ensure that errors in its databases are addressed appropriately and in a timely and documented fashion. EPA broadened the scope of an existing internal Agency data management weakness, consolidating Agency efforts to address the multiplicity of issues related to information management, data accuracy, and error correction. EPA's data management practices was identified as a management challenge from FY 1998–2001 by GAO and from FY 1998-2002 by OIG. EPA declared Information Resources Management (IRM) data management as an Agency weakness in FY 1994 and expanded the scope of the weakness in FY 2000.

EPA is working internally and in partnership with the states to improve data management, comprehensiveness, consistency, reliability, and accuracy for better performance measurement and achievement of environmental results. The Agency completed promulgation of six key data standards and their rules for implementation in FY 2001. The Environmental Data Standards Council developed four additional key data standards in the areas of permitting, enforcement and compliance, water quality monitoring, and tribal identifiers and expects to implement them during FY 2002. The Agency is also working to expand implementation of its Integrated Error Correction Process, which provides an effective feedback mechanism for reporting and resolving errors identified by the public on EPA web sites. From May 2000 to September 2001, EPA received 987 alleged errors and resolved 650 of them; the remainder are still under review. EPA has completed major components of a data architecture to support cross-organizational activities and has begun to develop a formal data architecture document that it expects to complete by May 2002. The Agency expects to fully implement the Central Data Exchange to improve reporting of environmental information by the regulated community and states to EPA by March 2004. The Agency also expects to complete development of a strategic plan for addressing data gaps by December 2002. The Agency anticipates that all corrective actions will be completed by the end of FY 2004.

Results-Based Information Technology Project Management

EPA needs a comprehensive approach to information technology (IT) capital investment planning and a disciplined budget process for managing its assets to meet programmatic objectives. In addition the Agency needs to ensure that IT projects are timely, cost-effective, and results-based. In FY 2001-2002 EPA's OIG identified IT project management as a management challenge. In addition in FY 2001 the Agency declared this issue as an internal Agency weakness and is taking a comprehensive and systematic approach to develop an appropriate strategy to better manage EPA's IT investments. This strategy consists of four overall goals: (1) automate the Agency's capital planning and investment control (CPIC) process by deploying the Information

Technology Investment Portfolio System (I-TIPS), (2) develop a complete investment portfolio aligned with the Agency's technology architecture, (3) improve proposal quality and analysis, and (4) establish efficiencies with other Agency management processes. The Agency anticipates that all corrective actions will be completed by FY 2004.

Relationships with States (NEPPS)

During the past two decades environmental and human health protection programs have grown in size, scope and complexity. Many environmental problems transcend media and geographic boundaries and solutions may require innovative, flexible, cross-media approaches. EPA and the states realize that traditional arrangements for implementing environmental problems were not as efficient and effective as they need to be. Through NEPPS, EPA established a framework to build a result-based management system to focus on joint planning and priority setting and use environmental indicators and outcome measures for accountability. GAO identified EPA-state relationships as a major management challenge in its January 1999 and 2001 reports to Congress on management challenges. OIG also identified EPA's relationships with states as a management challenge in FY 2000-2002. GAO's and OIG's concerns center around fundamental disagreements between EPA and the states over their respective roles, priorities among state environmental programs, and the appropriate degree of federal oversight. EPA relies upon state partners for successful completion of eight of the ten goals in the Agency's Strategic Plan.

The EPA Administrator has placed a greater emphasis on improving the Agency's relations with states, tribes, and other federal agencies. In an August 2001 policy memorandum, the Administrator called for senior Agency leadership to advance the partnership through increasing the Agency's flexibility for states to address the highest priority environmental problems, working with the states to improve performance measures, and generally increasing the incentives for states to improve results-based management under the Performance Partnership System. The Agency is also developing tools that state and EPA regional NEPPS negotiators can use to clarify the appropriate performance expectations. In addition EPA and the Environmental Council of States (ECOS) have an active joint workgroup to address continuing implementation issues and work to identify and remove remaining barriers to effective implementation of the Performance Partnership System.

National Pollutant Discharge Elimination System Permits

During the 1990s the backlog in EPA-issued major permits tripled and the backlog in state-issued permits doubled. The threat of the backlog to the environment is that expired NPDES permits might not reflect the most recent applicable effluent guidelines, water quality standards, or Total Maximum Daily Loads. Without timely issuance of high-quality permits, necessary improvements in water quality might be delayed. EPA headquarters and regional offices are working together closely to track both Agency- and state-issued permit efforts. EPA's OIG identified the backlog of

NPDES permits as a management challenge in FY 1998-2002, and the Agency declared NPDES permit as a material weakness in FY 1998.

The Agency has made substantial progress in implementing a process to effectively reduce the historical backlog in issuing NPDES permits. EPA, in consultation with state partners, developed and issued guidance—*Approaches for Reducing the NPDES Permit Backlog*—in July 1999. The guidance identifies four strategic objectives for reducing the backlog: (1) understand and better define the backlog, (2) examine permitting efficiencies and facilitate programmatic and technical streamlining opportunities, (3) provide funding and technical support for regions and states, and (4) encourage regions and states to share technical expertise and permitting tools. In May 1999 the Agency established two target dates for completion of corrective actions, one for individual permits for major facilities and one for individual permits for major and minor facilities combined. The target for the major facilities was to have no more than 10 percent of the permits backlogged by the end of the 2001 calendar year; the target for the combined major and minor facilities is 10 percent by the end of the 2004 calendar year. The Agency is also working closely with the regions to manage permit issuance efforts for both EPA- and state-issued NPDES permits. A monthly permit issuance/backlog trend report is distributed to each EPA region and the Agency's stakeholders. In addition, the Agency is examining strategies that will allow concentrating attention on eliminating the permit backlogs that have the most significant environmental impact. Corrective actions are expected to be completed by the end of FY 2005.

Laboratory Quality System Practices

Through internal reviews and OIG investigations, the Agency has found management control weaknesses and some cases of misconduct in laboratories concerning data quality that could impact environmental and enforcement decisions. EPA's OIG identified this issue as a management challenge in FY 1999-2002 and EPA declared it as an internal Agency weakness in FY 2000.

EPA completed independent technical reviews of its laboratories in FY 2001 to assess the Agency's ability to produce data of known and documented quality. The Agency is currently assessing draft review reports and proposed corrective action plans submitted by reviewed organizations. Other ongoing activities include assembling a workgroup consisting of both EPA and non-EPA members that will (1) identify weaknesses in laboratory quality systems that produce analytical data used for Agency decision making; (2) establish methods to detect and deter misconduct in labs; and (3) promote best practices in laboratory performance, documentation, and implementation. In addition each EPA organization will be responsible for establishing management controls to ensure that environmental measurement data supplied by laboratories are of known and documented quality. This effort includes monitoring and oversight of the development and implementation of Agency-approved quality systems by third parties. Completion of corrective actions is expected by December 2003.

Improved Management of Assistance Agreements

OIG audits have found that EPA needs to validate the effectiveness of its strategy for ensuring effective management of its assistance agreements. In FY 2000-2002 OIG identified the Agency's management of assistance agreements as a management challenge. During FY 2001 EPA conducted a review to validate the effectiveness of its post-award management policies. The review found that the Agency has made considerable progress in post-award management but that further improvement is needed. In FY 2002 EPA will consolidate all existing post-award management policies into a single, streamlined policy. In addition, EPA will continue to review quarterly reports and information from the Grantee Compliance Database and evaluate post-award monitoring plans. Completion of corrective actions is expected by FY 2002.

Proposed New Legislation for Fully Accruing Federal Employees Retirement and Health Benefits

In order to reflect more accurate costs of government programs, legislation has been proposed requiring each government Agency to account for their accrued retirement benefits and health care costs. In the past, a portion of the Civil Service Retirement System (CSRS) and health care costs were centrally managed. However, this resulted in an understatement of the true cost of government programs.

The Budget proposes a shift of these costs from central accounts to the Agency. This shift will ensure all benefits are included in EPA's budget and provide more accurate cost information. The new legislation does not effect budget outlays or alter the surplus/deficit in any way. Costs incurred by the Agency due to the new legislation will be offset by receipts in the pension and health funds.

The chart below presents the amounts associated with shifting this cost from centrally managed accounts to EPA, starting in 2003. In addition, for purposes of comparison, the amounts for fiscal years 2001 and 2002 are provided. This change in treatment of costs is the first in a series of steps that will be taken to ensure that the full annual cost of resources used is charged properly in the budget presentation.

Cost of Additional Agency Contributions
(Dollars in Millions)

Appropriation Account	FY 2001	FY 2002	FY 2003
Science and Technology	$14.1	$14.8	$15.3
Environmental Programs and Management	$62.3	$64.9	$67.2
Office of Inspector General	$2.5	$2.6	$2.6
Oil Spills Response	$1.0	$1.1	$1.1
Hazardous Substance Superfund	$18.6	$19.4	$20.0
Leaking Underground Storage Tanks	$0.9	$0.9	$0.9
FY 2003 Total	**$99.5**	**$103.6**	**$107.1**

STATE and TRIBAL ASSISTANCE GRANTS (STAG)
Appropriation Account

	FY 2001 Enacted with Recision (0.022%)	FY 2002 Enacted Budget	FY 2003 Pres Budget Total
~~STATE/TRIBAL GRANT ASSISTANCE~~	$1,005,782.4	$1,079,376.0	$1,158,276.0
~~INFRASTRUCTURE ASSISTANCE~~			
~~State Revolving Funds~~			
Clean Water State Revolvin	$1,347,030.0	$1,350,000 0	$1,212,000.0
Drinking Water State Revol	~~$823,185.0~~	~~$850,000.0~~	~~$850,000.0~~
Consolidated State Revolvi	$2,170,215.0	$2,200,000.0	$2,062,000.0
Brownfields Infrastructure Proj	-----	-----	$120,500.0
~~Special Needs Projects~~	~~$111,753.6~~	~~$115,000.0~~	~~$123,000.0~~
Mexican Border	$74,835.0	$75,000 0	$75,000 0
Bristol County, MA	$1,995 6	-----	-----
Alaskan Native Villages	$34,923 0	$40,000 0	$40,000 0
South Dakota Home Stake Iv	-----	-----	$8,000 0
Needy Cities Projects	$353,590.5	$343,900.0	$0.0
INFRASTRUCTURE ASSISTAI	#VALUE!	#VALUE!	$2,305,500.0
TOTAL STAG	#VALUE!	#VALUE!	$3,463,776 0

CATEGORIAL PROGRAM GRANTS (STAG)
by National Program Manager and State Grant
Dollars in Thousands

Grant	FY 2001 Enacted with Recission (.022%)	FY 2002 Enacted Budget	FY 2003 Pres Budget Total
Air & Radiation			
State and Local Assistance	$208,540 1	$221,540 1	$221,540.1
Tribal Assistance	$11,044 5	$11,044.5	$11,044 5
Radon	$8,139 9	$8,139 9	$8,139 9
	$227,724.5	$240,724 5	$240,724.5
Water			
Pollution Control (Section 106)	$171,883.3	$192,476.9	$180,376 9
Beaches Protection	$0.0	$10,000.0	$10,000 0
Counter-Terrorism	$0.0	$5,000 0	$5,000 0
Nonpoint Source (Section 319)	$237,476.8	$237,476 8	$238,476 8
Wetlands Program Development	$14,967 0	$14,967 0	$14,967 0
Water Quality Cooperative Agrmts	$18,958 2	$18,958 2	$38,958.2
	$443,285 3	$478,878.9	$487,778.9
Drinking Water			
Public Water System Supervision (PWSS	$93,100 2	$93,100 2	$93,100 2
Underground Injection Control (UIC)	$10,950 9	$10,950.9	$10,950.9
	$104,051 1	$104,051 1	$104,051.1
Hazardous Waste			
H.W. Financial Assistance	$106,363 6	$106,363.6	$106,363.6
Brownfields	$0 0	$0 0	$50,000.0
Underground Storage Tanks	$11,918 4	$11,918 4	$11,918.4
	$118,282 0	$118,282 0	$168,282.0
Pesticides & Toxics			
Pesticides Program Implementation	$13,085 5	$13,085.5	$13,085.5
Lead	$13,682 0	$13,682.0	$13,682 0
Toxic Substances Compliance	$5,138.8	$5,138.8	$5,138 8
Pesticides Enforcement	$19,867.9	$19,867 8	$19,867 8
	$51,774.2	$51,774 1	$51,774.1
Multimedia			
Environmental Information	$0.0	$25,000.0	$25,000 0
Enforcement State Grants	$0.0	$0.0	$15,000.0
Pollution Prevention	$5,986.3	$5,986.3	$5,986.3
Enforcement & Compliance Assurance	$2,209 3	$2,209.3	$2,209 3
Indian General Assistance Program	$52,469 7	$52,469.7	$57,469.7
	$60,665.3	$85,665 3	$105,665 3
TOTALS	**$1,005,782.4**	**$1,079,376.0**	**$1,158,276.0**

FY 2003 STAG CATEGORICAL PROGRAM GRANTS

(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Air Resource Assistance	Clean Air Act. §103	Air pollution control agencies as defined in section 302(b) of the CAA	S/L monitoring and data collection activities in support of the establishment of a $PM_{2.5}$ monitoring network and associated program costs.	$42,500 0	$42,500.0	Goal 1, Obj. 1
Air Resource Assistance	Clean Air Act, §103	Multi-jurisdictional organizations (non-profit organizations whose boards of directors or membership is made up of CAA section 302(b) agency officers and Tribal representatives and whose mission is to support the continuing environmental programs of the states);	Coordinating or facilitating a multi-jurisdictional approach to addressing regional haze	$10,000.0	$10,000.0	Goal 1, Obj. 1

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
ir Resource Assistance	Clean Air Act, Sections 103. 105, 106	Air pollution control agencies as defined in section 302(b) of the CAA: Multi-jurisdictional organizations (non-profit organizations whose boards of directors or membership is made up of CAA section 302(b) agency officers and whose mission is to support the continuing environmental programs of the states). Interstate air quality control region designated pursuant to section 107 of the CAA or of implementing section 176A. or section 184 NOTE. only the Ozone Transport Commission is eligible as of 2/1/99	Carrying out the traditional prevention and control programs required by the CAA and associated program support costs, Coordinating or facilitating a multi-jurisdictional approach to carrying out the traditional prevention and control programs required by the CAA; Supporting training for CAA section 302(b) air pollution control agency staff; Coordinating or facilitating a multi-jurisdictional approach to control interstate air pollution	$169,040.1	$169.040.1	Goal 1, Obj. All
Air Tribal Assistance	Clean Air Act. Sections 103 and 105. TCA in annual Appropriations Acts.	Tribes: Intertribal Consortia: State/ Tribal college or university	Conducting air quality assessment activities to determine a tribe's need to develop a CAA program: Carrying out the traditional prevention and control programs required by the CAA and associated program costs: Supporting training for CAA for federally recognized tribes	$11,044.5	$11,044.5	Goal 1, Obj. 1 Goal 1, Obj. 2

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Radon	Toxic Substances Control Act, Sections 10 and 306; TCA in annual Appropriations Acts	State Agencies, Tribes, Intertribal Consortia	Assist in the development and implementation of programs for the assessment and mitigation of radon	$8.139.9	$8,139.9	Goal 4, Obj. 4
Water Pollution Control Agency Resource Supplementation	FWPCA, as amended, §106, TCA in annual Appropriations Acts.	States, Tribes and Intertribal Consortia, and Interstate Agencies	Develop and carry out surface and ground water pollution control programs, including NPDES permits, TMDL's, WQ standards, monitoring, NPS control and UWA activities	$192,476 9	$180,376.9	Goal 2, Obj. 2
Nonpoint Source (NPS)	FWPCA, as amended, § 319(h); TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Implement EPA-approved State and Tribal nonpoint source management programs and fund priority projects as selected by the State.	$237,476.8	$238.476 8	Goal 2, Obj. 3
Wetlands Program Development	FWPCA, as amended, §104 (b)(3); TCA in annual Appropriations Acts.	States, Local Governments, Tribes, Interstate Organizations, Intertribal Consortia, and Non-Profit Organizations	To develop new wetland programs or enhance existing programs for the protection, management and restoration of wetland resources	$14,967.0	$14,967.0	Goal 2, Obj 2

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Water Quality Cooperative Agreements	FWPCA, as amended, §104(b)(3). TCA in annual Appropriations Acts.	States, Local Governments, Tribes, Non-Profit Organizations, Intertribal Consortia, and Interstate Organizations	Creation of unique and innovative approaches to pollution control and prevention requirements associated with wet weather activities, AFOs, TMDLs, source water protection, and targeted watersheds	$18,958.2	$38.958.2	Goal 2, Obj 2
Public Water System Supervision (PWSS)	Safe Drinking Water Act, §1443(a); TCA in annual Appropriations Acts.	States, Tribes, and Intertribal Consortia	Assistance to implement and enforce National Primary Drinking Water Regulations to ensure the safety of the Nation's drinking water resources and to protect public health.	$93,100.2	$93,100.2	Goal 2, Obj.1
Public Water System Supervision (PWSS) - Homeland Security	Safe Drinking Water Act, §1443(a); TCA in annual Appropriations Acts.	States, Tribes, and Intertribal Consortia	Counterterrorism coordinators to work with EPA and drinking water utilities in assessing drinking water safety.	$5,000.0	$5,000.0	Goal 2, Obj. 1
Underground Injection Control [UIC]	Safe Drinking Water Act, § 1443(b). TCA in annual Appropriations Acts	States, Tribes, Intertribal Consortia	Implement and enforce regulations that protect underground sources of drinking water by controlling Class I-V underground injection wells.	$10,950.9	$10.950.9	Goal 2, Obj. 1

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Beaches Grants	Beaches Environmental Assessment and Coastal Health Act of 2000; TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia, Local Governments	Develop and implement programs for monitoring and notification of conditions for coastal recreation waters adjacent to beaches or similar points of access that are used by the public.	$10,000.0	$10,000.0	Goal 2, Obj. 1
Hazardous Waste Financial Assistance	Resource Conservation Recovery Act, § 3011, FY 1999 Appropriations Act (PL 105-276), TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Development & Implementation of Hazardous Waste Programs	$106,363.6	$106,363.6	Goal 4, Obj. 5 Goal 5, Obj. 1 & 2 Goal 9, Obj. 1
Brownfields	Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, Section 128	States, Tribes, Intertribal Consortia	Build and support Brownfields programs which will assess contaminated properties, oversee private party cleanups, provide cleanup support through low interest loans, and provide certainty for liability related issues.	$0.0	$50,000.0	Goal 5, Obj. 1
Underground Storage Tanks [UST]	Resource Conservation Recovery Act Sections 8001 and 2007(f) and FY 1999 Appropriations Act (PL 105-276), TCA in annual Appropriations Acts	State, Tribes and Intertribal Consortia	Demonstration Grants, Surveys and Training; Develop & implement UST program	$11,918.4	$11,918.4	Goal 5, Obj 2

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Pesticides Program Implementation	The Federal Insecticide, Fungicide, and Rodenticide Act § 20 & 23; the FY 1999 Appropriations Act (PL 105-276). FY 2000 Appropriations Act (P L. 106-74); TCA in annual Appropriations Acts.	States, Tribes and Intertribal Consortia	Assist states and tribes to develop and implement pesticide programs, including programs that protect workers, ground-water, and endangered species from pesticide risks , and other pesticide management programs designated by the Administrator; develop and implement programs for certification and training of pesticide applicators; develop Integrated Pesticides Management (IPM) programs, support pesticides education, outreach, and sampling efforts for tribes.	$13.085 5	$13,085 5	Goal 4, Obj. 1
Lead	Toxic Substances Control Act. § 404 (g); TSCA 10; FY2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts	States, Tribes, Intertribal Consortia	To support and assist states and tribes to develop and carry out authorized state lead abatement certification, training and accreditation programs; and to assist tribes in development of lead programs	$13.682.0	$13.682.0	Goal 4, Obj. 2

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Toxic Substances Compliance Monitoring**	Toxic Substances Control Act, §28(a) and 404 (g); TCA in annual Appropriations Acts.	States, Territories, Tribes, Intertribal Consortia	Assist in developing and implementing toxic substances enforcement programs for PCBs, asbestos, and lead-based paint	$5,138.8	$5.138.8	Goal 9, Obj. 1
Pesticide Enforcement	FIFRA § 23(a)(1); FY 2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	States, Territories, Tribes, Intertribal Consortia	Assist in implementing cooperative pesticide enforcement programs	$19.867 8	$19,867 8	Goal 9, Obj. 1
Information Integration	As appropriate. Clean Air Act, Sec. 103; Clean Water Act, Sec. 104; Solid Waste Disposal Act, Sec. 8001; FIFRA, Sec 20; TSCA, Sec. 10 and 28; Marine Protection, Research and Sanctuaries Act, Sec. 203; Safe Drinking Water Act, Sec. 1442; Indian Environmental General Assistance Program Act of 1992, as amended; FY 2000 Appropriations Act (P.L. 106-74); Pollution Prevention Act, Sec. 6605; FY 2002 Appropriations Act and FY 2003 Appropriations Acts.	States, tribes, interstate agencies, tribal consortium, and other agencies with related environmental information activities.	Assists states and others to better integrate environmental information systems, better enable data-sharing across programs, and improve access to information.	$25.000.0	$25.000.0	Goal 7 Obj. 1

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Pollution Prevention	Pollution Prevention Act of 1990, §6605; TSCA 10. FY2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	States. Tribes. Intertribal Consortia	To assist state and tribal programs to promote the use of source reduction techniques by businesses and to promote other Pollution Prevention activities at the state and tribal levels.	$5.986.3	$5.986.3	Goal 4, Obj. 5
Enforcement & Compliance Assurance**	As appropriate. Clean Air Act, Sec. 103; Clean Water Act. Sec 104; Solid Waste Disposal Act. Sec. 8001; FIFRA. Sec 20; TSCA. Sec. 10 and 28; Marine Protection, Research and Sanctuaries Act, Sec. 203; Safe Drinking Water Act, Sec. 1442; Indian Environmental General Assistance Program Act of 1992, as amended; FY 2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	State. Territories. Tribes. Intertribal Consortia. Multi-jurisdictional Organizations	Assist in developing innovative sector-based, multi-media, or single-media approaches to enforcement and compliance assurance	$2,209.3	$2,209.3	Goal 9, Obj.2

Grant Title	Statutory Authorities	Eligible Recipients*	Eligible Uses	FY 2002 Enacted	FY 2003 Request	FY 2003 Goal/ Objective
Multi-media Enforcement State Grants	FY 2002 Appropriations Act.	States. Tribes, and other entities to be determined.	Media-specific and multi-media funding to states and tribes for compliance assurance activities including compliance assistance and incentives, inspections, and enforcement actions.	$0	$15,000.0	Goal 9, Obj. 1
Indian General Assistance Program	Indian Environmental General Assistance Program Act of 1992, as amended: TCA in annual Appropriations Acts.	Tribal Governments and Intertribal Consortia	Plan, develop and establish Tribal environmental protection programs.	$52.469.7	$57,469 7	Goal 4, Obj 7

* The Recipients listed in this column reflect assumptions in the FY 2003 Budget Request in terms of expected and/or anticipated eligible recipients.

** In prior years these grants were displayed as Toxic Enforcement Grants. They are both part of the Toxics Enforcement Key Program [Goal 9, Objectives 1 and 2.]

WORKING CAPITAL FUND

In FY 2003, the Agency begins its seventh year of operation of the Working Capital Fund (WCF). A WCF is a revolving fund authorized by law to finance a cycle of operations, where the costs of goods and services provided are charged to the users on a fee-for-service basis. The funds received are available without fiscal year limitation, to continue operations and to replace capital equipment. EPA's WCF was implemented under the authority of Section 403 of the Government Management Reform Act of 1994 and EPA's FY 1997 Appropriations Act. Permanent WCF authority was contained in the FY 1998 Appropriations Act.

The Chief Financial Officer and the Office of the Comptroller initiated the WCF in FY 1997 as part of their effort to: (1) be accountable to Agency offices, the Office of Management and Budget, and the Congress; (2) increase the efficiency of the administrative services provided to program offices; and (3) increase customer service and responsiveness. The Agency has a WCF Board which provides policy and planning oversight and advises the CFO regarding the WCF financial position. The Board, chaired by the Deputy CFO, is composed of sixteen permanent members from the program offices and the regional offices.

Two Agency services, begun in FY 1997 will continue into FY 2003. These are the Agency's computer center and telecommunications operations, managed by the Office of Technology Operations and Planning (OTOP), and Agency postage costs, managed by the Office of Administration. The Agency's FY 2003 budget request includes resources for these two activities in each National Program Manager's submission, totaling approximately $132.0 million. These estimated resources may be increased to incorporate program office's additional service needs during the operating year. To the extent that these increases are subject to Congressional reprogramming notifications, the Agency will comply with all applicable requirements.

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