EPA's Mission

The mission of the Environmental Protection Agency (EPA) is to protect and safeguard human health and the environment. This budget supports the Administration's commitment to environmental results as we work to increase the pace of improvement and identify new and better ways to carry out our mission. It also emphasizes the need for sound management of our federal resources, as delineated in the President's Management Agenda.

Annual Performance Plan and Congressional Justification

The EPA's Fiscal Year (FY) 2009 Annual Performance Plan and Congressional Justification requests $7.1 billion in discretionary budget authority and 17,217.0 Full Time Equivalents (FTE). This request reflects the Agency's efforts to work with its partners towards protecting air, water, and land, as well as providing for EPA's role in safeguarding the nation from terrorist attacks. This request echoes the Administration's commitment to setting high environmental protection standards, while focusing on results and performance, and achieving goals outlined in the President's Management Agenda.

The budget builds on EPA's long record of accomplishments since its founding 37 years ago. The agency and nation as a whole has achieved enormous successes. This budget builds on these successes by strengthening our geographic initiatives, better leveraging our nation's resources, strengthening citizen involvement, maintaining our enforcement capabilities, and implementing the President's commitment to efficiently manage Federal resources.

Homeland Security

Following the cleanup and decontamination efforts of 2001, the Agency has focused on ensuring we have the tools and protocols needed to detect and recover quickly from deliberate incidents. The emphasis for FY 2009 is on several areas: biodefense research, decontaminating threat agents, protecting our water and food supplies, and ensuring trained personnel and key lab capacities are in place to be drawn upon in the event of multiple incidents of national significance. Part of these FY 2009 efforts will continue to include activities that support the Water Security Initiative (WSI) and assist in improving response capabilities through specialized Weapons of Mass Destruction (WMD) training, state-of-the-art field and analytical equipment, and increased technical knowledge relating to chemical, biological, and radiological substances.

Human Capital

EPA will continue to develop workforce planning strategies that link current and future Human Capital needs to mission accomplishment which will result in significant reductions in skills gaps for Mission Critical Occupations. In addition, EPA's recruitment strategy will focus on hiring needs that will encourage the use of hiring flexibilities, build on centralized and local recruitment approaches, and focus on attracting applicants who are talented, diverse and committed to EPA's mission. In part, EPA also will continue to target developmental resources to retain a highly-skilled and results-oriented workforce with the right mix of technical expertise, professional

experience and leadership capabilities. A sound, sustained and strategic approach toward HC will assure EPA and its workforce has sustained mission success.

Workforce

EPA values its world class workforce and its expertise enables us to meet our urgent responsibilities across a broad range of national and local environmental issues. In FY 2009, we are making adjustments to EPA's workforce management strategy that will help us better align resources, skills, and Agency priorities. A key step in this adjustment is improving the alignment between the total number of positions authorized and actual FTE utilization. As such, in FY 2009 EPA proposed to reduce its Agency authorized FTE ceiling by approximately 89.5 positions (below the FY 2008 Enacted FTE Ceiling) to 17,217.0, which is consistent with the Agency's historical FTE levels. The result of these reductions will not impede Agency efforts to maximize efficiency and effectiveness in carrying out its programs and will not result in an overall change in the number of FTEs at EPA.

Organization of the Annual Performance Plan and Congressional Justification

In response to the President's Management Agenda, this budget more clearly integrates budget and performance. EPA developed a submission that presents the budget in a more succinct, programmatic format. It also closely aligns performance information with program narratives. Verification and validation documents will be provided electronically.

Annual Performance Plan and Congressional Justification Components

EPA's Annual Performance Plan is integrated into the Annual Budget Request. Where applicable, programmatic funding increases are tied to performance measures and associated targets by program/project. To fully explain the Agency's resource needs, the Budget contains annual performance goals and performance measures that the Agency uses to achieve its results.

Annual Performance Plan and Congressional Justification

Chapters include:

Resource Summary Tables

- Appropriation Summary ($s)
- Appropriation Summary (FTEs)

Goal Overview (Goals 1-5)

- Goal, Appropriation Summary ($s)
- Goal, Appropriation Summary (FTEs)

Program Project by Appropriation (EPM, ST, STAG, IG, BF, SF, LUST & OIL)

- Resources for Appropriation
- Annotated Bill Language by Appropriation
    - Resource Table by Appropriation, Program Area, Program Project

- Program Project Fact Sheets (the following included within each factsheet)
  - Resource Chart ($s, FTEs)
  - Program Project Description
  - FY 2009 Activities and Performance Plan
  - PART Highlight Information
  - Performance Targets
  - FY 2009 Change from FY 2008 President's Budget
  - Statutory Authority

Program Performance and Assessment

- PART - OMB Report
- PART - Supplemental Information
- Performance
  - 4-year array of APGs, PMs and Baselines
  - 4-year array of APGs, PMs and Baselines for Enabling Support Programs
- Verification and Validation

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Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification

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Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification

APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud
Science & Technology	$728,339.9	$754,506.0	$760,084.0	$763,527.0
Environmental Program & Management	$2,321,877.0	$2,298,188.0	$2,327,962.0	$2,338,353.0
Inspector General	$32,288.4	$38,008.0	$41,099.0	$39,483.0
Building and Facilities	$39,044.3	$34,801.0	$34,258.0	$35,001.0
Oil Spill Response	$16,185.2	$17,280.0	$17,056.0	$17,687.0
Superfund Program	$1,310,820.8	$1,211,431.0	$1,216,794.0	$1,230,652.0
IG Transfer	$12,286.2	$7,149.0	$11,486.0	$7,164.0
S&T Transfer	$29,312.3	$26,126.0	$25,718.0	$26,417.0
Hazardous Substance Superfund	$1,352,419.3	$1,244,706.0	$1,253,998.0	$1,264,233.0
Leaking Underground Storage Tanks	$83,673.9	$72,461.0	$105,816.0	$72,284.0
State and Tribal Assistance Grants	$3,337,543.9	$2,744,450.0	$2,937,051.0	$2,621,952.0
SUB-TOTAL, EPA	*$7,911,371.9*	*$7,204,400.0*	*$7,477,324.0*	*$7,152,520.0*
Rescission of Prior Year Funds				
Rescission of Prior Year Funds	$0.0	($5,000.0)	($5,000.0)	($10,000.0)
TOTAL, EPA	$7,911,371.9	$7,199,400.0	$7,472,324.0	$7,142,520.0

Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification

APPROPRIATION SUMMARY

Full-time Equivalents (FTE)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud
Science & Technology	2,425.9	2,405.8	2,405.8	2,387.5
Science and Tech. - Reim	3.2	3.0	3.0	3.0
Environmental Program & Management	10,652.2	10,867.0	10,849.7	10,796.1
Envir. Program & Mgmt - Reim	32.3	1.5	1.5	0.0
Inspector General	223.7	287.7	259.8	287.7
Oil Spill Response	90.7	102.2	102.2	102.2
Oil Spill Response - Reim	9.3	0.0	0.0	0.0
Superfund Program	2,958.7	3,056.8	3,056.8	3,031.7
IG Transfer	83.8	44.1	72.0	44.1
S&T Transfer	104.5	105.0	105.0	110.0
Hazardous Substance Superfund	3,147.0	3,205.9	3,233.8	3,185.8
Superfund Reimbursables	102.9	77.5	77.5	75.5
Leaking Underground Storage Tanks	67.3	75.3	75.3	75.3
FEMA - Reim	2.2	0.0	0.0	0.0
WCF-REIMB	111.5	110.7	110.7	116.7
Rereg. & Exped. Proc. Rev Fund	144.2	187.2	187.2	187.2
Pesticide Registration Fund	59.5	0.0	0.0	0.0
SUB-TOTAL, EPA	*17,071.9*	*17,323.8*	*17,306.5*	*17,217.0*
Rescission of Prior Year Funds				
TOTAL, EPA	*17,071.9*	*17,323.8*	*17,306.5*	*17,217.0*

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Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification

GOAL, APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud
Clean Air and Global Climate Change	$896,120.0	$910,364.6	$971,739.4	$938,582.3
Environmental Program & Management	$450,222.1	$438,093.2	$435,919.9	$444,555.5
Science & Technology	$197,385.5	$216,316.5	$224,039.8	$220,394.6
Building and Facilities	$8,615.6	$7,636.6	$7,514.4	$7,732.2
State and Tribal Assistance Grants	$232,846.4	$239,194.0	$294,606.0	$256,174.0
Inspector General	$4,155.8	$5,550.1	$6,185.4	$6,047.6
Hazardous Substance Superfund	$2,894.7	$3,574.2	$3,474.0	$3,678.4
Clean and Safe Water	$3,195,855.0	$2,714,506.8	$2,854,781.9	$2,580,704.2
Environmental Program & Management	$476,552.9	$454,199.6	$462,519.5	$464,561.4
Science & Technology	$125,267.3	$150,194.4	$139,019.7	$148,109.0
Building and Facilities	$5,985.0	$5,309.6	$5,224.6	$5,241.9
State and Tribal Assistance Grants	$2,570,904.0	$2,085,766.0	$2,227,415.0	$1,943,712.0
Inspector General	$17,145.7	$19,037.2	$20,603.2	$19,080.0
Land Preservation and Restoration	$1,783,171.9	$1,662,989.5	$1,688,592.2	$1,691,127.9
Environmental Program & Management	$215,305.2	$220,341.8	$214,681.4	$221,595.9
Science & Technology	$11,638.0	$12,367.4	$12,196.1	$15,301.1
Building and Facilities	$4,602.1	$4,270.1	$4,201.8	$4,376.0
State and Tribal Assistance Grants	$134,110.3	$125,620.0	$115,023.0	$126,146.0
Leaking Underground Storage Tanks	$83,673.9	$72,461.0	$105,816.0	$72,284.0
Oil Spill Response	$16,185.2	$17,280.0	$17,056.0	$17,687.0
Inspector General	$2,098.5	$2,659.0	$2,871.8	$2,840.2
Hazardous Substance Superfund	$1,315,558.7	$1,207,990.2	$1,216,746.1	$1,230,897.7

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud
Healthy Communities and Ecosystems	$1,288,596.5	$1,174,061.5	$1,227,362.5	$1,191,003.6
Environmental Program & Management	$620,678.4	$621,787.6	$652,643.1	$628,315.8
Science & Technology	$345,300.8	$332,682.3	$342,403.5	$338,843.1
Building and Facilities	$13,996.9	$12,167.4	$11,947.2	$12,242.3
State and Tribal Assistance Grants	$290,025.9	$192,117.0	$204,616.0	$196,417.0
Inspector General	$5,886.9	$6,863.1	$7,490.6	$7,338.3
Hazardous Substance Superfund	$12,707.5	$8,444.2	$8,262.1	$7,847.1
Compliance and Environmental Stewardship	$747,628.5	$742,477.6	$734,848.0	$751,102.0
Environmental Program & Management	$559,118.4	$563,765.8	$562,198.2	$579,324.5
Science & Technology	$48,748.3	$42,945.5	$42,425.0	$40,879.2
Building and Facilities	$5,844.6	$5,417.3	$5,369.9	$5,408.5
State and Tribal Assistance Grants	$109,657.3	$101,753.0	$95,391.0	$99,503.0
Inspector General	$3,001.5	$3,898.6	$3,948.1	$4,177.0
Hazardous Substance Superfund	$21,258.4	$24,697.4	$25,515.8	$21,809.8
Sub-Total	*$7,911,371.9*	*$7,204,400.0*	*$7,477,324.0*	*$7,152,520.0*
Rescission of Prior Year Funds				
Total	$7,911,371.9	$7,204,400.0	$7,477,324.0	$7,152,520.0

Clean Air and Global Climate Change

Protect and improve the air so it is healthy to breathe and risks to human health and the environment are reduced. Reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.

STRATEGIC OBJECTIVES:

- Through 2011, working with partners, protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants.
- Through 2012, working with partners, reduce human health risks by reducing exposure to indoor air contaminants through the promotion of voluntary actions by the public.
- By 2030, through worldwide action, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery, and overexposure to ultraviolet radiation, particularly among susceptible subpopulations, such as children, will be reduced.
- Through 2011, working with partners, minimize unnecessary releases of radiation and be prepared to minimize impacts to human health and the environment should unwanted releases occur.
- By 2012, 160 million metric tons of carbon equivalent (MMTCE) of emissions will be reduced through EPA's voluntary climate protection programs.
- Through 2012, provide sound science to support EPA's goal of clean air by conducting leading-edge research and developing a better understanding and characterization of human health and environmental outcomes.

GOAL, OBJECTIVE SUMMARY
Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Clean Air and Global Climate Change	**$896,120.0**	**$910,364.6**	**$971,739.4**	**$938,582.3**	**($33,157.1)**
Healthier Outdoor Air	$572,756.3	$587,200.0	$644,090.6	$616,455.8	($27,634.8)
Healthier Indoor Air	$45,342.4	$45,841.6	$45,581.9	$43,502.4	($2,079.5)
Protect the Ozone Layer	$19,578.7	$17,120.9	$16,865.3	$17,463.6	$598.3

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Radiation	$35,584.1	$39,085.5	$38,254.1	$41,396.8	$3,142.7
Reduce Greenhouse Gas Intensity	$128,736.6	$122,819.6	$130,092.3	$121,063.3	($9,029.0)
Enhance Science and Research	$94,122.0	$98,297.0	$96,855.2	$98,700.4	$1,845.2
Total Authorized Workyears	2,597.5	2,610.1	2,608.8	2,628.1	19.3

EPA implements the Clean Air and Global Climate Change goal through national and regional programs designed to provide healthier outdoor and indoor air for all Americans, protect the stratospheric ozone layer, minimize the risks from radiation releases, reduce greenhouse gas intensity, and enhance science and research. These programs are all founded on several common principles: using health and environmental risks to set priorities, streamlining programs through regulatory reforms; encouraging market-based approaches; facilitating deployment of cost-effective technologies; promoting energy efficiency and clean energy supply; using sound science, and maintaining partnerships with states, Tribes, local governments, non-governmental organizations, and industry.

EPA's key clean air programs – including those addressing particulate matter, ozone, acid rain, air toxics, indoor air, radiation and stratospheric ozone depletion – focus on some of the highest health and environmental risks faced by the Agency. These programs have achieved results. Every year, state and Federal air pollution programs established under the Clean Air Act prevent tens of thousands of premature mortalities, millions of incidences of chronic and acute illness, tens of thousands of hospitalizations and emergency room visits, and millions of lost work days.

Clean Air Rules

The Clean Air Rules are a major component of EPA work under Goal 1, and include a suite of actions that will dramatically improve America's air quality. Three of the rules specifically address the transport of pollution across state borders (the Clean Air Interstate Rule, the Clean Air Mercury Rule and the Clean Air Nonroad Diesel Rule). These rules provide national tools to achieve significant improvement in air quality and the associated benefits of improved health, longevity and quality of life for all Americans. In FY 2009, EPA will continue to work with the states and industry to implement these rules.

In addition to the Clean Air Rules, EPA will address emission reductions through the Diesel Emissions Reduction Grants program authorized in sections 791-797 of the Energy Policy Act of 2005. This program will provide immediate emission reductions from existing diesel engines through engine retrofits, rebuilds and replacements, switching to cleaner fuels, idling reduction strategies and other clean diesel strategies that can reduce particulate matter (PM) emissions up to 95 percent, smog-forming emissions, such as hydrocarbons and nitrogen oxide, up to 90 percent and greenhouse gases up to 20 percent. In FY 2009, EPA will issue and manage various categories of Diesel Emission Reduction grants, including grants to target diesel emissions in ports.

Energy

The Administration has a diverse portfolio of policy measures – including mandatory, incentive-based, and voluntary programs – to meet the President's goal to reduce the greenhouse gas (GHG) intensity of the U.S. economy by 18 percent by 2012. The President has set a goal of reducing U.S. gasoline usage by 20 percent in the next ten years to lessen the nation's dependence on imported oil. EPA has a substantial role to play in advancing the President's energy and climate strategies, given the Agency's mandate for environmental protection and the close linkage of energy and environment issues.

Ongoing efforts are already very significant. For example, EPA's current efforts will contribute about 70% of the reductions necessary to meet the President's 2012 GHG intensity goal. Moreover, EPA's efforts can and will achieve remarkable results in a number of other critical areas. By the end of 2008, for example, EPA expects to have programs in place that will speed the development of lower-emissions coal, oil, gas, and renewable technologies; partner with the manufacturing sector to develop more energy efficient technologies; and create the framework needed to transform our transportation system from one almost solely reliant on petroleum to one that accommodates an array of alternate fuels.

In 2009, EPA will begin implementation activities associated with the new GHG rules for fuels and vehicles, which will be completed at the start of FY 2009. Needed implementation activities will include upgrading and expanding vehicle engine and fuel data systems to incorporate new data and handle certification, compliance, reporting and tracking requirements; developing and implementing means to validate credit trading; implementing the fuel quality compliance program including field sampling and lab analysis; and stakeholder outreach. In addition to these implementation activities, the NVFEL will need to begin certifying alternative fuels and vehicles.

By FY 2009, U.S. energy production is expected to grow by almost 10% from FY 2005 levels. To help ensure clean and affordable energy, EPA will enhance related permitting efforts. Anticipated upcoming proposals include 75,000 new oil and gas wells on Tribal and Federal Land, 40 liquefied natural gas terminals, 100+ re-permitting for nuclear power plants and 25 new nuclear plants.

This expansion in the energy sector will result in increased workload for: air and waters modeling and monitoring to determine the ambient impacts of energy activities; analysis of emerging technologies such as carbon sequestration, tidal, wind, biomass, coal liquefaction and oil shale; effective and early collaboration among states, tribes and Federal agencies to expedite NEPA reviews; and, EPA direct implementation of air and water permitting activity on state/Tribal lands where the programs are not authorized and on Federal lands and offshore areas where the program cannot be authorized.

In FY 2009, EPA and states will begin to fulfill the mandate of the Energy Policy Act to increase development of domestic energy resources and meet the demands of the large increase in new energy exploration while ensuring environmentally sound decision-making. This will involve support for state and tribal work to ensure effective and efficient analysis and permitting to avoid

slowing the pace of new energy projects. The FY 2009 Budget Request includes $14.0 million to support Permitting for Energy Production.

Reduce Risks to Indoor Air and Radon Programs

The Indoor Air Program characterizes the risks of indoor air pollutants to human health, develops techniques for reducing those risks, and educates the public about those techniques and other actions they can take to reduce their risks from indoor air. Through voluntary partnerships with non-governmental and professional organizations, EPA educates and encourages individuals, schools, industry, the health-care community, and others to take action to reduce health risks in indoor environments using a variety of approaches, including national public awareness and media campaigns, as well as community-based outreach and education. EPA also uses technology-transfer to improve the design, operation, and maintenance of buildings – including schools, homes, and workplaces – to promote healthier indoor air. The FY 2009 Budget Request for the Reduce Risk from Indoor Air program totals $19.9 million. EPA also carries out a national radon program that encourages and facilitates voluntary national, regional, state, and Tribal programs and activities that support initiatives targeted to radon testing and mitigation, as well as to radon resistant new construction. Radon is second only to smoking as a cause of lung cancer. The FY 2009 Budget Request for the Radon programs totals $14.0 million.

Climate Protection

For more than a decade, businesses and other organizations have partnered with EPA through voluntary climate protection programs to pursue common sense approaches to reducing greenhouse gas emissions and meeting the President's greenhouse gas intensity goal. Voluntary programs such as Energy Star and SmartWay Transport have increased the use of energy-efficient products and practices, spurred investment in clean energy development, and reduced emissions of carbon dioxide, methane, and other greenhouse gases with very high global warming potentials. These partnership programs break down market barriers and promote the deployment of cost-effective technologies and processes designed to yield greenhouse gas reductions over the life of the investment. In FY 2009, EPA will continue to work with other countries and government agencies to support the Methane to Markets Partnership and Asia-Pacific Partnership on Clean Development and Climate. The FY 2009 Budget Request for the Climate Protection programs totals $98.3 million.

Stratospheric Ozone – Domestic and Montreal Protocol

In FY 2009, EPA's Domestic Stratospheric Ozone Protection Program will continue to implement the provisions of the Clean Air Act and the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), and contribute to the reduction and control of ozone-depleting substances (ODSs) in the U.S. and lowering health risks to the American public associated with exposure to UV radiation, including prevention of 6.3 million cases of fatal skin cancer in the US. The FY 2009 Budget Request for the Stratospheric Ozone: Domestic program totals $4.7 million. In addition, through the Multilateral Fund of the Montreal Protocol, EPA will invest in cost-effective projects that are designed to build capacity and eliminate ODS production and consumption in over 60 developing countries. The Multilateral Fund continues to support

over 5,150 activities in 139 countries, and when fully implemented, will prevent annual emissions of more than 223,729 metric tons of ODS. Over 80% of already agreed-upon project activities have been implemented to date, with remaining work in these already agreed-upon projects expected to be fully implemented by 2009. The FY 2009 Budget Request for the Stratospheric Ozone: Multilateral Fund totals $9.9 million.

Radiation Monitoring

In FY 2009, EPA will continue upgrading the national radiation monitoring system to expand the population and geographic areas covered, and to increase the speed at which the system samples the air, analyzes the measurements, and transmits the results. Mobile transportable monitors will be maintained in ready condition so they can be quickly deployed to monitor radiation levels at locations near and downwind from the initial point of release. The Agency will continue to enhance laboratory response capacity and capability to ensure a minimal level of surge capacity for radiological incidents.

Research

EPA conducts research to provide a scientific foundation for the Agency's actions to protect the air all Americans breathe. The Agency's air research program supports implementation of the Clean Air Act, especially the National Ambient Air Quality Standards (NAAQS), which set limits on how much stratospheric ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead, are allowed in the atmosphere. EPA also conducts research on ozone and hazardous air pollutants, also known as air toxics.

In FY 2009, the Agency's air research program will continue research to understand the sources and composition of air pollution; develop methods for controlling sources' emissions; study atmospheric chemistry and model U.S. air quality; investigate Americans' exposure to air pollution; and conduct epidemiological, clinical, and toxicological studies of air pollution's health effects. In FY 2009, the program will continue to focus on the effects of air pollution near roads on human health, as well as the development and evaluation of effective mitigation strategies. The Agency also will fund research grants to universities and nonprofits to study topics such as the relationship between long-term exposure to fine particles in the atmosphere and the frequency and progression of pulmonary and cardiovascular diseases.

Clean and Safe Water

Ensure drinking water is safe. Restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.

STRATEGIC OBJECTIVES:

- Protect human health by reducing exposure to contaminants in drinking water (including protecting source waters), in fish and shellfish, and in recreational waters.
- Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters.
- By 2011, conduct leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in drinking water, fish and shellfish, and recreational waters and to support the protection of aquatic ecosystems-specifically, the quality of rivers, lakes, and streams, and coastal and ocean waters.

GOAL, OBJECTIVE SUMMARY
Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Clean and Safe Water	**$3,195,855.0**	**$2,714,506.8**	**$2,854,781.9**	**$2,580,704.2**	**($274,077.7)**
Protect Human Health	$1,157,573.7	$1,156,551.7	$1,183,199.2	$1,161,766.0	($21,433.2)
Protect Water Quality	$1,912,954.7	$1,422,049.0	$1,536,958.8	$1,286,409.9	($250,548.9)
Enhance Science and Research	$125,326.6	$135,906.1	$134,623.9	$132,528.3	($2,095.6)
Total Authorized Workyears	2,854.7	2,901.8	2,901.0	2,863.4	-37.6

EPA implements the Clean and Safe Water goal through programs designed to provide improvements in the quality of surface waters and drinking water. In FY 2009, EPA will work with states and tribes to continue to accomplish measurable improvements in the safety of the nation's drinking water and in the conditions of rivers, lakes, and coastal waters. With the help of these partners, EPA expects to make important progress in these areas and support additional

focused water initiatives, including carbon sequestration, energy permitting, water security, and sustainable infrastructure.

The National Water Program will continue to place special emphasis on sustainable infrastructure and watershed stewardship, through its "four pillars" program, specifically focusing on innovative financing and leveraging for infrastructure sustainability, banking for wetlands conservation, and trading among point sources and non-point sources for water quality upgrades. In FY 2009, the Agency will continue advancing the water quality monitoring initiative and a water quality standards strategy under the Clean Water Act, as well as, important rules and activities under the Safe Drinking Water Act. Related efforts to improve monitoring and surveillance will help advance water security nationwide.

Drinking Water

During FY 2009, EPA, the states and community water systems will build on past successes while working toward the FY 2009 goal of assuring that 90 percent of the population served by community water systems receives drinking water that meets all applicable health-based standards. To promote compliance with drinking water standards, states carry out a variety of activities, such as conducting onsite sanitary surveys of water systems and working with small systems to improve their capabilities. EPA will work to improve compliance rates by providing guidance, training, and technical assistance; ensuring proper certification of water system operators; promoting consumer awareness of drinking water safety; maintaining the rate of system sanitary surveys and onsite reviews; and taking appropriate action for noncompliance. In FY 2009, states and EPA will process Underground Injection Control permit applications for experimental carbon sequestration and gather information from these pilots to facilitate the permitting of large-scale commercial carbon sequestration in the future. To help ensure that water is safe to drink, EPA provides $842.2 million for the Drinking Water State Revolving Fund.

Clean Water

In FY 2009, EPA will work with states to continue progress toward the clean water goals to implement core clean water programs, including innovations that apply programs on a watershed basis, and to accelerate efforts to improve water quality on a watershed basis. Building on the progress toward clean water achieved over the past 30 years, EPA is working with states and tribes to implement the Clean Water Act by focusing on: scientifically sound water quality standards, effective water monitoring, strong programs for controlling nonpoint sources of pollution, and strong discharge permit programs. To keep pace with the nation's burgeoning energy exploration and development, EPA will place an increased focus on energy related permitting in FY 2009. The work involves NPDES permit actions related to conventional oil and gas, coalbed methane, coal mining, ethanol, power plants, refineries, uranium, natural gas liquids, liquefied natural gas terminals, pipelines, and oil shale/tar sands.

The Agency's request continues the monitoring initiative begun in 2005 to strengthen the nationwide monitoring network and complete the baseline water quality assessment of the nation's waters. These efforts are resulting in scientifically defensible water quality data and

information essential for cleaning up and protecting the nation's waters. Progress in improving coastal and ocean waters documented in the National Coastal Condition Report will be maintained by focusing on: assessing coastal conditions, reducing vessel discharges, implementing coastal nonpoint source pollution programs, managing dredged material, and supporting international marine pollution control. EPA will continue to provide annual capitalization to the Clean Water State Revolving Fund (CWSRF). In FY 2009 EPA will provide $555.0 million and will allow EPA to meet the Administration's capitalization target of $6.8 billion total for 2004-2011 and enable the program to meet its long-term revolving target of $3.4 billion.

Homeland Security

EPA has a major role in supporting the protection of the nation's critical water infrastructure from terrorist threats. In FY 2009, EPA will continue to support the Water Security Initiative (WSI) pilot program and water sector-specific agency responsibilities, including the Water Alliance for Threat Reduction (WATR), to protect the nation's critical water infrastructure. The FY 2009 budget provides $35.2 million for water security efforts. This includes $22.6 million for WSI and WATR which will continue efforts to demonstrate the concept of an effective contamination warning system that drinking water utilities in high threat cities of all sizes and characteristics could adopt. In FY 2009, there will be increased training and outreach exercises for Regional Water Emergency Response/Technical Assistance Team members, consistent with the National Approach to Response. Also, the Agency, in collaboration with our water sector security stakeholders, will continue efforts to develop, implement and initiate tracking of national measures related to homeland security critical infrastructure protection activities.

Research

EPA's drinking water and water quality research programs conduct leading edge, problem-driven research to provide a sound scientific foundation for Federal regulatory decision-making. These efforts will result in strengthened public health and aquatic ecosystem protection by providing data methods, models, assessments, and technologies for EPA program and Regional Offices, as well as state and local authorities.

In FY 2009, these research programs will conduct studies and deliver science products needed by the nation to realize clean and safe water. The drinking water research program will focus on treatment strategies, exposure and analytical methods, and health effects information that can be applied to classes of contaminants in the context of the drinking water hydrologic cycle – source water, treatment, and distribution. The water quality research program will continue providing approaches and methods the Agency and its partners need to develop and apply criteria to support designated uses, support implementation of watershed management approaches, and application of technological options to restore and protect water bodies using information on effective treatment and management alternatives. These programs also will conduct research that will yield tools and strategies to manage our nation's aging water infrastructure.

Other important areas of research in FY 2009 will include: 1) studies on aquifer storage and recovery (ASR) on the safety of drinking water and the impacts of subsurface carbon dioxide

(CO_2) storage on drinking water quality; 2) revising aquatic life guidelines, recreational water criteria, the effects of emerging contaminants, nutrients, biocriteria and multiple stressor effects on stream biota; 3) watershed management work that supports diagnoses of impairment, mitigation and pollutant load reduction from headwater streams and isolated wetlands; and 4) improving the control of microbial releases from publicly owned treatment works (POTWs) during periods of significant wet weather events.

Recognizing that environmental policy and regulatory decisions will only be as good as the science upon which they are based, EPA makes every effort to ensure that its science is of the highest quality and relevance, thereby, providing the basis for sound environmental results. EPA uses the Research and Development (R&D) Investment Criteria of quality, relevance, and performance in its decision-making processes through the use of research strategies and plans, program review and evaluation by the Board of Scientific Counselors (BOSC) and the Science Advisory Board (SAB), and peer review.

Land Preservation and Restoration

Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

STRATEGIC OBJECTIVES:

- By 2011, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.
- By 2011, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.
- Through 2011, provide and apply sound science for protecting and restoring land by conducting leading-edge research, which through collaboration, leads to preferred environmental outcomes

GOAL, OBJECTIVE SUMMARY
Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Land Preservation and Restoration	**$1,783,171.9**	**$1,662,989.5**	**$1,688,592.2**	**$1,691,127.9**	**$2,535.7**
Preserve Land	$235,637.7	$231,785.2	$237,813.1	$232,718.3	($5,094.8)
Restore Land	$1,497,066.2	$1,382,689.3	$1,403,339.5	$1,405,042.6	$1,703.1
Enhance Science and Research	$50,468.1	$48,515.1	$47,439.6	$53,367.1	$5,927.5
Total Authorized Workyears	4,514.9	4,579.3	4,574.3	4,550.2	-24.1

Land is one of America's most valuable resources. If they are not controlled, hazardous and non-hazardous wastes on the land can migrate to the air, groundwater, and surface water, contaminating drinking water supplies, causing acute illnesses or chronic diseases, and threatening healthy ecosystems in urban, rural, and suburban areas. To address these issues, EPA implements the Land Preservation and Restoration goal with the following approaches—prevention, protection, and response activities to address risks posed by releases of harmful substances on land; emergency preparedness, response and homeland security to address

immediate risks to human health and the environment; enforcement and compliance assistance to determine what needs to be done and who should pay; and sound science and research to address risk factors and new, innovative solutions.

Prevention, Protection, and Response Activities

EPA leads the country's activities to prevent and reduce the risks posed by releases of harmful substances and to preserve and restore land with effective waste management and cleanup methods. In FY 2009, the Agency is requesting $1,637.8 million to continue to apply the most effective approach to preserve and restore land by developing and implementing prevention programs, improving response capabilities, and maximizing the effectiveness of response and cleanup actions. This approach will help ensure that human health and the environment are protected and that land is returned to beneficial use.

In FY 2009, EPA also will continue to use a hierarchy of approaches to protect the land: reducing waste at its source, recycling waste, managing waste effectively by preventing spills and releases of toxic materials, and cleaning up contaminated properties. The Agency especially is concerned about threats to our most sensitive populations, such as children, the elderly, and individuals with chronic diseases, and prioritizes cleanups accordingly.[1]

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund) provides legal authority for EPA's work to protect the land. The Agency and its partners use Superfund authority to clean up uncontrolled or abandoned hazardous waste sites, allowing land to be returned to productive use. The Resource Conservation and Recovery Act (RCRA) also provides legal authority for EPA to fulfill this goal. Under RCRA, EPA works in partnership with states and tribes to address risks associated with leaking underground storage tanks and with the generation and management of hazardous and non-hazardous waste.

In addition, EPA uses authorities provided under the Clean Air Act, Clean Water Act, and Oil Pollution Act of 1990 to protect against spills and releases of hazardous materials. Controlling the many risks posed by accidental and intentional releases of harmful substances presents a significant challenge. In FY 2009, EPA will continue to ensure that it is adequately prepared to minimize contamination and harm to the environment from spills and releases of hazardous materials by improving its readiness to respond to emergencies through training as well as maintaining a highly skilled, well-trained, and equipped response workforce.

The following themes characterize EPA's land program activities under Goal 3 in FY 2009: Revitalization; Recycling, Waste Minimization and Energy Recovery; and implementation of the Energy Policy Act of 2005 (EPAct).

- Revitalization: All of EPA's cleanup programs (Superfund Remedial, Superfund Federal Facilities Response, Superfund Removal, RCRA Corrective Action, Brownfields, and

[1] Additional information on these programs can be found at: www.epa.gov/superfund, http://www.epa.gov/superfund/programs/er/index.htm, http://www.epa.gov/epaoswer/hazwaste/ca/, http://www.epa.gov/brownfields/, http://www.epa.gov/swerust1/, http://www.epa.gov/swerffrr/ and http://www.epa.gov/swerrims/landrevitalization.

Underground Storage Tanks) and their partners are taking proactive steps to facilitate the cleanup and revitalization of contaminated properties. In FY 2009, the Agency is requesting $914.8 million to help communities revitalize these once productive properties by removing blight, satisfying the growing demand for land, helping limit urban sprawl, fostering ecologic habitat enhancements, enabling economic development, and maintaining or improving quality of life. In reflection of the high priority the Agency has placed on land revitalization, EPA recently adopted a series of acres-based, cross-program revitalization measures (CPRMs)[2] to help document progress in cleaning up and promoting the protective use of previously contaminated land. The CPRMs will help EPA communicate the extent of land subject to its cleanup programs, and the subset of that land that is protective for people for current conditions, and that is ready (i.e., protective) for anticipated future uses. EPA cleanup programs began implementing these new measures in FY 2007. Data from the CPRMs will be available in FY 2008 and beyond.

- Recycling, Waste Minimization and Energy Recovery: EPA is requesting $10.8 million in FY 2009 to support EPA's strategy for reducing waste generation and increasing recycling. EPA's strategy will continue to be based on: (1) establishing and expanding partnerships with businesses, industries, tribes, states, communities, and consumers; (2) stimulating infrastructure development and environmentally responsible behavior by product manufacturers, users, and disposers; and (3) helping businesses, government, institutions, and consumers reduce waste generation and increase recycling through education, outreach, training, and technical assistance. In FY 2009, EPA will continue the Resource Conservation Challenge (RCC) as a major national effort to find flexible, yet more protective ways to conserve our valuable natural resources through waste reduction, energy recovery, and recycling. Through RCC, the Agency also will pursue the advancement of alternative domestic energy sources as well as clean energy, which power our economy and drive our environmental successes.

- Implementing the EPAct: The EPAct[3] contains numerous provisions that significantly affect Federal and state underground storage tank (UST) programs and requires that EPA and states strengthen tank release and prevention programs. In FY 2007, working with its tank partners, EPA developed grant guidelines[4] which implement the UST provisions of the EPAct. In FY 2009, EPA is requesting $35.1 million to provide assistance to states to help them meet their new responsibilities, which include: (1) mandatory inspections every three years for all underground storage tanks, (2) operator training, (3) prohibition of delivery for non-complying facilities[5], and (4) secondary containment or financial responsibility for tank manufacturers and installers. EPA also is submitting legislative language to allow states to use alternative mechanisms such as the Environmental Results Program (ERP) to meet the mandatory three-year inspection requirement. This proposal provides states with a less

[2] For more information on the CPRMs, go to http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf.
[3] For more information, refer to http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ058.109.pdf (scroll to Title XV - Ethanol And Motor Fuels, Subtitle B – Underground Storage Tank Compliance, on pages 500-513 of the pdf file).
[4] For more information, refer to http://www.epa.gov/OUST
[5] Refer to *Grant Guidelines to States for Implementing the Delivery Prohibition Provision of the Energy Policy Act of 2005*, August 2006, EPA-510-R-06-003, http://www.epa.gov/oust/fedlaws/epact_05.htm#Final.

costly alternative to meet the objectives of the EPAct. EPA also will continue implementing the UST Tribal strategy[6] developed in FY 2006 in Indian country.

In addition to these themes, EPA's Homeland Security and Enforcement work are important components of the Agency's prevention, protection, and response activities.

Homeland Security

EPA will continue to improve its emergency preparedness and response capability, including homeland security capabilities. In FY 2009, the Agency is requesting $54.6 million to improve its capability to respond effectively to incidents that may involve harmful chemical, oil, biological, and radiological substances. The Agency will provide training to build the cadre of volunteers in the Response Support Corps (RSC) and/or as part of an Incident Management Team (IMT) and also will continue to participate in multi-agency training and exercises.

In FY 2009, EPA will build the Environmental Laboratory Response Network (eLRN) through the improvement of an electronic data deliverable for use by all eLRN laboratories. EPA also will continue to maximize the effectiveness of its involvement in national security events through pre-deployments of assets such as emergency response personnel and field detection equipment.

EPA also will maintain and improve the Emergency Management Portal (EMP). FY 2009 will be the first year for complete integration of the basic management modules (i.e., environmental assessment, equipment, personnel, and decontamination). EPA will continue to manage, collect, and validate new information for new and existing Weapons of Mass Destruction (WMD) agents as new decontamination techniques are developed or as other information emerges from the scientific community.

Enforcement

Enforcement authorities play a unique role under the Superfund program: they are used to leverage private-party resources to conduct a majority of the cleanup actions and to reimburse the Federal government for cleanups financed by appropriations. In FY 2009, the Agency is requesting $173.9 million to support enforcement activities at Federal and non-Federal Superfund sites. The Superfund program's "enforcement first" policy ensures that sites with viable potentially responsible parties (PRPs) are cleaned up by those parties, allowing EPA to focus appropriated resources on sites where viable PRPs either do not exist or lack funds or capabilities needed to conduct the cleanup. In tandem with this approach, various reforms have been implemented to increase fairness, reduce transaction costs, and promote economic development and make sites available for appropriate reuse.[7] The Department of Justice supports EPA's Superfund Enforcement program through negotiations and judicial actions to compel PRP cleanup and litigation to recover Trust Fund monies spent.

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[6] Refer to *Strategy for an EPA/Tribal Partnership to Implement Section 1529 of the Energy Policy Act of 2005*, August 2006, EPA-510-F-06-005, http://www.epa.gov/oust/fedlaws/epact_05.htm#Final.

[7] For more information regarding EPA's enforcement program and its various components, please refer to http://www.epa.gov/compliance/cleanup/superfund/.

EPA also works to ensure that required legally enforceable institutional controls and financial assurance instruments are in place and adhered to at Superfund sites and at facilities subject to RCRA Corrective Action to ensure the long-term protectiveness of cleanup actions.

EPA has ongoing cleanup and property transfer responsibilities at some of the Nation's most contaminated Federal properties, which range from realigning and closing military installations and former military properties containing unexploded ordnance, solvents, and other industrial chemicals to Department of Energy sites containing nuclear waste. EPA's Superfund Federal Facilities Response and Enforcement program helps Federal and local governments, tribes, states, redevelopment authorities and the affected communities ensure contamination at Federal or former Federal properties is addressed in a manner that protects human health and the environment.[8]

In FY 2009, the Agency will continue to establish and use Special Accounts within the Superfund Trust Fund. As of the end of FY 2007, EPA maintains more than 700 Special Accounts within the Superfund Trust Fund. These accounts segregate site-specific funds obtained from responsible parties that enter into settlement agreements with EPA. These funds may create an incentive for other PRPs at that specific site to perform cleanup work. In addition, these funds may be used by the Agency to fund cleanup activities if there are no known or viable PRPs. The Agency will practice good fiscal stewardship in cleaning up sites by maximizing the use of site-specific Special Account funds while preserving appropriated Trust Fund dollars for sites without viable PRPs.

In FY 2009, the Agency will negotiate remedial design/remedial action cleanup agreements and removal agreements at contaminated properties. Where negotiations fail, the Agency will either take unilateral enforcement actions to require PRP cleanup or use appropriated dollars to remediate sites. When appropriated dollars are used to cleanup sites, the program will recover this money from the PRPs whenever possible.

Enhancing Science and Research to Restore and Preserve Land

The FY 2009 Land Research program supports the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by providing the science to accelerate scientifically defensible and cost-effective decisions for cleanup at complex sites in accordance with CERCLA.

In FY 2009, EPA is requesting $53.4 million in support of EPA's efforts to enhance science and research for land preservation and restoration. Research activities in FY 2009 will focus on contaminated sediments, ground water contamination, multi-media, and site-specific technical support. Research will advance EPA's ability to accurately characterize the risks posed by contaminated sediments and determine the range and scientific foundation for remedy selection options. In addition, research aimed at developing data to support dosimetric and toxicologic assessment of amphibole asbestos, fiber-containing material from Libby, Montana will be

[8] For more information on the Superfund Federal Facilities Response and Enforcement program, please refer to http://www.epa.gov/fedfac.

conducted. Groundwater research will focus on the transport of contaminants in that medium and the subsequent intrusion of contaminant vapors into buildings and continue research on developing applications for permeable reactive barriers.

Oil spill remediation research will continue on physical, chemical, and biological risk management methods for petroleum and non-petroleum oils spilled into freshwater and marine environments as well as development of a protocol for testing solidifiers and treating oil. Underground storage tank research will address the development of online transport models that can be used by state project managers. Research areas such as resource conservation, corrective action, multi-media modeling, leaching, containment systems, and landfill bioreactors will constitute the major areas of research and support for RCRA activities in FY 2009. EPA also will continue to develop a site-specific management approach of brownfields sites, develop validated acceptable practices for land revitalization, collaborate with the private sector to conduct field sampling, and with the states to optimize operations and monitoring of several landfill bioreactors and determine their potential to provide alternative energy in the form of landfill gas while increasing the nation's landfill capacity.

In FY 2009, additional resources will be invested to research nanotechnology fate and transport in response to an independent review of the RCRA portion of the Land Research program to address emerging issues and strategic EPA issues. The primary objective of this research will be to determine the physicochemical properties controlling the movement of nanomaterials through soil and aquatic ecosystems. Research questions include the identification of system parameters that alter the surface characteristics of nanomaterials through aggregation (e.g. pH effects), complexation (e.g., surface complexation by dissolved organic carbon) or changes in oxidation state (e.g., chemical- or biological-mediated electron transfer).

2007 PART

The following programs were assessed by OMB's Program Assessment Rating Tool (PART) for the 2007 PART process:

- Land Protection and Restoration Research

More detailed information is provided in specific program project descriptions.

Healthy Communities and Ecosystems

Protect, sustain, or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships.

STRATEGIC OBJECTIVES:

- By 2011, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.
- Sustain, clean up, and restore communities and the ecological systems that support them.
- Protect, sustain, and restore the health of critical natural habitats and ecosystems.
- Through 2011, identify and synthesize the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, communities, and ecosystems. Focus research on pesticides and chemical toxicology; global change; and comprehensive, cross-cutting studies of human, community, and ecosystem health.

GOAL, OBJECTIVE SUMMARY
Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Healthy Communities and Ecosystems	**$1,288,596.5**	**$1,174,061.5**	**$1,227,362.5**	**$1,191,003.6**	**($36,358.9)**
Chemical and Pesticide Risks	$410,407.9	$390,946.1	$387,933.0	$396,717.0	$8,784.0
Communities	$324,279.5	$234,851.1	$239,667.5	$235,626.1	($4,041.4)
Restore and Protect Critical Ecosystems	$169,769.5	$178,088.3	$220,411.0	$181,029.0	($39,382.0)
Enhance Science and Research	$384,139.6	$370,176.0	$379,351.0	$377,631.4	($1,719.6)
Total Authorized Workyears	3,743.2	3,761.1	3,735.6	3,749.7	14.1

In FY 2009, the Environmental Protection Agency will protect, sustain or restore the health of communities and ecosystems by bringing together a variety of programs, tools, approaches and resources, including partnerships with stakeholders and Federal, state, Tribal, and local government agencies. EPA manages environmental risks to watersheds, communities, homes, and workplaces to protect human health and the environmental integrity of ecosystems. The Agency employs a mix of regulatory programs and partnership approaches to achieve results in ways that are efficient, innovative, and sustainable. Ideally, EPA can implement a strategy of preventing pollution at the source; however, where programs to prevent pollution or ecosystem damage are not viable, EPA promotes waste minimization, avoidance of impact on habitat, safe disposal, and remediation.

In managing risk, EPA directs its efforts toward the greatest threats in our communities, homes, and workplaces, including threats to sensitive populations such as children and the elderly, and to communities with potential disproportionately high and adverse environmental and public health effects including minorities and/or low-income communities. In general, because of their unique anatomy, biological make-up and behavior patterns, children may be more at risk for exposure to potential toxics. Even older Americans in good health may be at increased risk from exposure to environmental pollutants. As people age, their bodies are less able to detoxify and eliminate toxins. Native Americans represent another segment of the population with a different risk profile. Their traditional sources for food and ways of life may lead to higher levels of exposure to certain toxics.

Pesticides Programs

A key component of protecting the health of people, communities, and ecosystems is identifying, assessing, and reducing the risks presented by the thousands of chemicals on which our society and economy have come to depend. Toward that end, EPA is investing $133.8 million in Pesticides Licensing programs in FY 2009. Chemical and biological pesticides help meet national and global demands for food; provide effective pest control for homes, schools, gardens, highways, utility lines, hospitals, and drinking water treatment facilities; and control animal vectors of disease.

During FY 2009, EPA will continue to review and register new pesticides, new uses for existing pesticides, and other registration requests in accordance with Food Quality Protection Act (FQPA) standards and Pesticide Registration Improvement Renewal Act (PRIA 2) timeframes. EPA will continue to process these registration requests, with special consideration given to susceptible populations, especially children. Specifically, EPA will focus special attention on the foods commonly eaten by children, to reduce pesticide exposure to children where the science identifies potential concerns.

Reduced concentrations of pesticides in water sources indicate the efficacy of EPA's risk assessment, management, mitigation, and communication activities. Using sampling data collected under the U.S. Geological Survey (USGS) National Water Quality Assessment Program, EPA will monitor the impact of our regulatory decisions for four pesticides of

concern—diazinon, chlorpyrifos, malathion, and azinphos-methyl—and consider whether any additional action is necessary.[9] In FY 2009 the Agency will continue to work with USGS to develop sampling plans and refine goals, and we will ask USGS to add additional insecticides to sampling protocols and establish baselines for newer products that are replacing organophosphates, such as synthetic pyrethroids.

EPA's statutory and regulatory functions include registration, reregistration, Reregistration Eligibility Decisions implementation, registration review, risk reduction implementation, rulemaking and program management. Many of these actions will be for reduced-risk pesticides for which, once registered and utilized by pesticide users, increased benefits will accrue to society. Working together with the affected user communities through programs such as the Pesticide Environmental Stewardship Program and the Strategic Agricultural Initiative, the Agency will find ways to accelerate the adoption of these lower-risk products.

Along with assessing the risks that pesticides pose to human health, EPA conducts ecological risk assessments under the Endangered Species Act (ESA) to determine potential effects on plants, animals, and ecosystems. To ensure unreasonable risks are avoided, EPA may impose risk mitigation measures such as modifying use rates or application methods, restricting uses, or denying uses. EPA must ensure that pesticide regulatory decisions will not adversely modify critical habitat or jeopardize the continued existence of species listed by the U.S. Fish and Wildlife Service or National Marine Fisheries Service as threatened or endangered.

In the biodefense arena, EPA will continue work to develop and validate methods to evaluate the efficacy of antimicrobial products against bioterrorism agents, expanding this work to address unique formulations, additional surface types, and additional bioterrorism agents and emerging pathogens. The Agency will address critical gaps in efficacy test methodology and knowledge of microbial resistance. In addition to vegetative bacteria, in FY 2009, EPA will address threatening viruses and other emerging pathogens in environmental media. EPA will invest in the development and evaluation of efficacy test protocols for products designed to control viruses in the environment during decontamination. The development of "decon toolboxes" for specific bioterrorism agents or classes of bacteria/viruses will continue into FY 2009.

In order to improve the Agency's ability to respond to events involving biothreat agents, EPA will increase the number of standardized and validated methods for evaluating the efficacy of decontamination agents. EPA will continue to seek independent third-party analysis for method validation efforts through recognized standard setting organizations. As new methods are developed, statistical modeling for various biodefense scenarios will be critical to the development of science based performance standards. Microbial persistence, resistance to antimicrobial agents, and an understanding of biofilm environments are also key factors in evaluating the efficacy of decontamination tools.

[9] Gilliom, R.J., et al. 2006. *The Quality of Our Nation's Waters: Pesticides in the Nation's Streams and Ground Water, 1992–2001.* Reston, Virginia: U.S. Geological Survey Circular 1291. 171p. Available on the internet at: http://pubs.usgs.gov/circ/2005/1291/.

This work is taking place in the Homeland Security: Preparedness, Response and Recovery program.

Toxics Programs

EPA programs under this goal have many direct and many indirect benefits. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,500 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, but it also has 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.

The Acute Exposure Guideline Levels (AEGLs) program was designed by EPA to provide scientifically credible data to directly support chemical emergency planning, response, and prevention programs mandated by Congress. Emergency workers and first responders addressing accidental or intentional chemical releases need to know how dangerous a chemical contaminant may be to breathe or touch, and how long it may remain dangerous. The program develops short-term exposure limits applicable to the general population for a wide range of extremely hazardous substances and has assigned values to 218 chemicals to date.

In addressing chemicals that have entered the market before the inception of the New Chemical Review program, EPA will continue to implement its voluntary High Production Volume (HPV) Chemicals program. The HPV Chemicals Program challenges industry to develop chemical hazard data on existing chemicals that it chooses to "sponsor." EPA will make data publicly available for approximately 1,800 HPV chemicals sponsored under the program and issue initial risk screening reports for the highest priority of those chemicals. Complementing HPV is the Voluntary Children's Chemical Evaluation Program (VCCEP), a high-priority screening program targeting existing chemicals believed to have particular impact on children's health.

The Agency will continue to manage its programs to address specific chemicals and toxics of concern, including lead, mineral fibers, mercury, polychlorinated biphenyls (PCBs), perfluorooctanoic acid (PFOA), and persistent, bioaccumulative and toxic (PBT) chemicals. The Lead Program is focusing efforts on reducing lead hazards, and in FY 2009 will implement a final regulation to address lead-safe work practices for renovation, repair and painting activities in homes with lead-based paint. The program also will continue to improve methods to reach vulnerable populations and communities with a high concentration of children with elevated blood-lead levels and emphasize grant-supported activities such as state-implemented lead-based paint training and certification programs.

Water Programs

EPA's ecosystem protection programs encompass a wide range of approaches that address specific at-risk regional areas and larger categories of threatened systems, such as estuaries and wetlands. Locally generated pollution, combined with pollution carried by rivers and streams and through air deposition, can accumulate in these ecosystems and degrade them over time. Large water bodies, such as the Gulf of Mexico, the Great Lakes, and the Chesapeake Bay, have been exposed to substantial pollution over many years. Coastal estuaries and wetlands are also vulnerable. As the populations in coastal regions grow, the challenges to preserve and protect these important ecosystems increase. Working with stakeholders, EPA has established special programs to protect and restore these unique resources.

In FY 2009, EPA will continue cooperation with Federal, state and Tribal governments and other stakeholders to achieve the President's goal, set in 2004, to restore, improve, and protect three million acres of wetlands by 2009. FY 2009 funding supports and monitors all 28 NEPs in implementing approved Comprehensive Conservation and Management Plans (CCMPs), which identify more than 2,000 priority actions needed to protect and restore the estuaries. The FY 2009 budget for NEPs and coastal watersheds is $17.2 million.

The Great Lakes Program ecosystem's FY 2009 budget request continues support of strategic Great Lakes activities pursuant to Executive Order 13340 and the Great Lakes Water Quality Agreement. The program will monitor ecosystem indicators; support toxics reduction through contaminated sediment remediation and pollution prevention; protect and restore habitat; and address strategic issues such as aquatic invasive species and investigation of the Lake Erie dead zone and the decline of *Diporeia*, a key lower-food web organism. The FY 2009 request to implement the Great Lakes Legacy Act continues to support the cleanup of contaminated sediments.

The FY 2009 budget request also will enable the Chesapeake Bay Program to continue work with program partners to accelerate implementation of pollution reduction and aquatic habitat restoration efforts and ensure that water quality objectives are achieved as soon as possible. EPA is committed to its ambitious long-term goals of 100 percent attainment of dissolved oxygen standards in waters of the Chesapeake Bay and 185,000 acres of submerged aquatic vegetation (SAV). The FY 2009 request will bring the Agency closer to addressing key priority coastal and ocean issues in the Gulf of Mexico, such as coastal restoration, water quality for healthy beaches and shellfish beds through improved detection and forecasting of harmful algal blooms and microbial source tracking methodologies, and reduction of nutrient inputs to coastal ecosystems.

In conducting special initiatives and planning activities, in FY 2009 EPA is investing $2.1 million in the South Florida Program to assist with coordinating and facilitating the ongoing implementation of the Water Quality Protection Program for the Florida Keys National Marine Sanctuary (FKNMS), conduct studies to determine cause and effect

relationships among pollutants and biological resources, implement wastewater and storm water master plans, and provide public education and outreach activities.

New strategic targets are proposed for the South Florida Program in the 2006-2011 Strategic Plan. The new strategic targets address important environmental markers such as stony coral cover, health and functionality of seagrass beds, water quality in the FKNMS, and phosphorus levels throughout the Everglades Protection Area and effluent limits for all discharges, including storm water treatment areas.

Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for communities to take action to reduce toxic pollution. Through CARE, communities create local collaborative partnerships that implement local solutions to minimize exposure to toxic pollutants and reduce their release. In FY 2009 the Agency is investing $2.4 million in the program to award approximately 12 new grants, provide technical resources and training to approximately 50 communities, and work with other federal agencies to coordinate support for communities.

Brownfields

Improving a community's ability to make decisions that affect its environment is at the heart of EPA's community-centered work. EPA shares information and builds community capacity to consider the many aspects of planned development or redevelopment. EPA encourages community development by providing funds to assist communities with inventory, assessment, and clean up of the contaminated properties ("Brownfields") that lie abandoned or unused. In addition, the Smart Growth Program works with stakeholders to create an improved economic and institutional climate for Brownfields redevelopment. Addressing these challenges requires combining innovative and community-based approaches with national guidelines and interagency coordination to achieve results.

International Activities

EPA leads efforts to address global environmental issues. To sustain and enhance domestic and international environmental progress, EPA enlists the cooperation of other nations and international organizations to help predict, understand, and solve environmental problems of mutual concern. By assisting developing countries to manage their natural resources and protect the health of their citizens, EPA also helps to protect human health and the environment in the U.S.

The Agency also works to include environmental protection provisions and commitments to effectively enforce environmental laws and regulations in all international trade agreements negotiated by the United States. As an example, EPA contributes to the associated environmental reviews and environmental cooperation agreements by developing baseline assessments of existing environmental law and enforcement regimes in a number of U.S. trading partner countries, advocating for greater attention to invasive

species, and addressing other concerns associated with the movement of traded goods. Addressing local pollution and infrastructure deficiencies along the U.S.-Mexico border are also priorities for Mexico and the United States under the Border 2012 Agreement. The key to sustaining and enhancing progress, both domestically and internationally, is the collaborative efforts of national, Tribal, state, and local governments, international organizations, the private sector, and concerned citizens.

Environmental Justice

EPA is committed to protecting the health and environment of all people, regardless of race, color, national origin, or income. Toward that end, the Agency will focus its environmental justice efforts on the following eight national priorities:

- Reducing asthma attacks,
- Reducing exposure to air toxics,
- Increasing compliance with regulations,
- Reducing incidence of elevated blood lead levels,
- Ensuring that fish and shellfish are safe to eat,
- Ensuring that water is safe to drink,
- Revitalizing brownfields and contaminated sites, and
- Using collaborative problem-solving to address environmental and public health concerns.

Research

EPA has a responsibility to ensure that efforts to reduce potential environmental risks are based on the best available scientific information. Strong science allows for identification of the most important sources of risk to human health and the environment, as well as the best means to detect, abate, and avoid possible environmental problems, and thereby guides our priorities, policies, and deployment of resources.

To accelerate the pace of environmental protection for healthy people, communities, and ecosystems, EPA will engage in high-priority, cutting-edge, multidisciplinary research efforts in areas related to human health, ecosystems, mercury, global change, pesticides and toxics, endocrine disruptors, computational toxicology, nanotechnology and Homeland Security.

In FY 2009, the Human Health Research Program is working to maintain its successful program in reducing uncertainties in risk assessment while orienting this work toward developing and linking indicators of risk along the source-exposure-effects-disease continuum that can be used to demonstrate reductions in human risk. This strategic shift is designed to include research that addresses limitations, gaps, and challenges articulated in the 2003 and 2007 Reports on the Environment. Research includes development of sensitive and predictive methods to identify viable bio-indicators of exposure, susceptibility, and effect that could be used to evaluate public health impacts at various geospatial and temporal scales.

The Agency's human health risk assessment (HHRA) research program will implement a process to identify, compile, characterize, and prioritize new scientific studies into Integrated Science Assessments (ISAs) of criteria air pollutants to assist EPA's air and radiation programs in determining the National Ambient Air Quality Standards (NAAQS), deliver final ISAs for environmental effects of sulfur oxide and nitrogen oxides, and release a draft ISA for carbon monoxide. In addition, the HHRA research program will complete multiple human health assessments of high priority chemicals for interagency review or external peer review and post several completed human health assessments in the integrated risk information system.

In order to assess the benefits of ecosystem services to human and ecological well-being, it is important to define ecosystem services and their implications, measure, monitor and map those services at multiple scales over time, develop predictive models for quantifying the changes in ecosystem services, and develop decision platforms for decision makers to protect and restore ecosystem services through informed decision making. This represents a transition for the Ecosystems research program in FY 2009. To meet these objectives, the Agency's ecosystems research will build on existing work in environmental monitoring and assessment, landscape ecology, modeling ecological stressor-response relationships, and assessing vulnerability to natural and human stressors.

Over the last decade, the endocrine disruptor research program conducted the underlying research, developed and standardized protocols, prepared background materials for transfer, briefed Agency advisory committees, participated on international committees on harmonization of protocols, and participated in validation of 19 different *in vitro* and/or *in vivo* assays for the development and implementation of the Agency's two tiered Endocrine Disruptors Screening Assay. In FY 2009, research will continue in the following areas:

- Development of novel *in vitro* assays as improved alternatives that may further reduce the numbers of animals used;
- Finalization of the Tier 2 amphibian developmental/reproductive assay and the fish 2 generation study for validation; and
- Leadership on the guidance document and multi-laboratory standardization of the Tier 2 mammalian protocol.

In FY 2009, the National Center for Computational Toxicology (NCCT) will play a critical role in coordinating and implementing these activities across the Agency. In addition, in FY 2009, greater emphasis will be placed on using systems biology-based approaches to advance health-based assessments.

The computational toxicology research program's strategic direction is guided by three long term goals:

- Improving the linkages in the source-outcome paradigm;

- Providing tools for screening and prioritization of chemicals under regulatory review; and
- Enhancing quantitative risk assessment.

In FY 2009, continued research in the pesticides and toxics research program will characterize toxicity and pharmacokinetic profiles of perfluoroalkyl chemicals, examine the potential for selected perfluorinated telomers to degrade to perfluorooctanoic acid or its precursors, and develop methods and models to forecast the fate of pesticides and byproducts from source waters through drinking water treatment systems and ultimately to the U.S. population. The program also will conduct research to develop spatially-explicit probabilistic models for ecological assessments and evaluate the potential environmental and human health impacts of genetically engineered crops.

EPA will increase efforts to investigate nanotechnology's environmental, health, and safety implications in FY 2009. This research will examine which processes govern the environmental fate of nanomaterials and what data are available/needed to enable nanomaterial risk assessment. Research will continue on improving our measurement, understanding, and control of mercury, with a research focus on the fate and transport of mercury and mercury compounds, and an evaluation of the effectiveness of the Clean Air Mercury rule. The Agency will also cultivate the next generation of environmental scientists by awarding fellowships to pursue higher education in environmentally related fields and by hosting recent graduates at its facilities.

EPA will continue research to better understand how global change (*e.g.*, climate change) will affect the environment, including the environmental and human health implications of greenhouse gas mitigation strategies, and the implications of climate change for the Agency's fulfillment of its statutory, regulatory and programmatic requirements. The Agency's climate change research also includes the development of decision support tools to help resource managers adapt to a changing climate.

In FY 2009, the Agency will continue to enhance the nation's preparedness and response and recovery capabilities for homeland security incidents through research, development, and technical support activities. EPA will significantly increase its emphasis on biodefense research related to anthrax including sampling, decontamination, and risk assessment methods and models to aid first responders in determining the extent of an outdoor release of anthrax as well as to aid in the identification of appropriate decontamination options. More specifically, EPA will strengthen its research in the following areas:

- Development and adaptation of methods to test for anthrax including the extent of contamination and clearance following wide-area decontamination;
- Determination of deposition and adhesion properties of anthrax and its ability to re-aerosolize from materials common to wide-area settings;
- Development of methods to effectively decontaminate anthrax in wide area environments while minimizing the generation of waste; and

- Development and adaptation of methods and models for hazard and exposure assessments needed to determine risk-based clean up goals for anthrax.

Recognizing that environmental policy and regulatory decisions will only be as good as the science upon which they are based, EPA makes every effort to ensure that its science is of the highest quality and relevance, thereby providing the basis for sound environmental results. EPA uses the Research and Development (R&D) Investment Criteria of quality, relevance, and performance in its decision-making processes through the use of research strategies and plans, program review, peer review, and evaluation by the Board of Scientific Counselors (BOSC) and the Science Advisory Board (SAB).

Six major research programs in this goal have undergone OMB's PART evaluation through FY 2007. They include endocrine disruptors research, ecosystems protection research, human health research, global change research, human health risk assessment research, and safe pesticides/safe toxics research.

Compliance and Environmental Stewardship

Protect human health and the environment through ensuring compliance with environmental requirements by enforcing environmental statutes, preventing pollution, and promoting environmental stewardship. Encourage innovation and provide incentives for governments, businesses, and the public that promote environmental stewardship and long-term sustainable outcomes.

STRATEGIC OBJECTIVES:

- By 2011, maximize compliance to protect human health and the environment through enforcement and other compliance assurance activities by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated by regulated entities, including those in Indian country. (Baseline: 3-year rolling average FYs 2003-2005: 900,000,000 pounds.)

- By 2011, enhance public health and environmental protection and increase conservation of natural resources by promoting pollution prevention and the adoption of other stewardship practices by companies, communities, governmental organizations, and individuals.

- Protect human health and the environment on tribal lands by assisting federally-recognized tribes to build environmental management capacity, assess environmental conditions and measure results, and implement environmental programs in Indian country.

- Conduct leading-edge, sound scientific research on pollution prevention, new technology development, socioeconomic, sustainable systems, and decision-making tools. By 2011, the products of this research will be independently recognized as providing critical and key evidence in informing Agency polices and decisions and solving problems for the Agency and its partners and stakeholders

GOAL, OBJECTIVE SUMMARY
Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Compliance and Environmental Stewardship	**$747,628.5**	**$742,477.6**	**$734,848.0**	**$751,102.0**	**$16,254.0**
Achieve Environmental Protection through Improved Compliance	$492,019.1	$506,199.5	$506,581.5	$516,901.6	$10,320.1
Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices	$117,520.8	$109,079.8	$101,403.7	$107,098.6	$5,694.9
Improve Human Health and the Environment in Indian Country	$78,703.7	$74,343.8	$73,238.6	$75,902.7	$2,664.1
Enhance Societies Capacity for Sustainability through Science and Research	$59,384.9	$52,854.5	$53,624.2	$51,199.1	($2,425.1)
Total Authorized Workyears	3,361.3	3,471.4	3,486.7	3,425.5	-61.2

The EPA will work to improve the nation's environmental protection practices and enhance natural resource conservation on the part of government, business, and the public. To accomplish these goals, the Agency will employ a mixture of effective inspection, enforcement and compliance assistance strategies; provide leadership and support for pollution prevention and sustainable practices; reduce regulatory barriers; and refine and apply results-based, innovative, and multi-media approaches to environmental stewardship and safeguarding human health.

In addition, EPA will assist Federally-recognized tribes in assessing environmental conditions in Indian Country, and will help build their capacity to implement environmental programs. EPA also will strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

Improving Compliance with Environmental Laws

In order to be effective, the EPA requires a strong enforcement and compliance program, which: identifies and reduces noncompliance problems; assists the regulated community in understanding environmental laws and regulations; responds to complaints from the public; strives to secure a level economic playing field for law-abiding companies; and deters future violations. EPA's total proposed FY 2009 budget to improve compliance with environmental laws is $516.9 million.

In order to meet the Agency's goals, the program's strategy employs an integrated, common-sense approach to problem-solving and decision-making. An appropriate mix of data collection and analysis, compliance monitoring, assistance and incentives, civil and criminal enforcement resources, and innovative problem-solving approaches address significant environmental issues and achieve environmentally beneficial outcomes.

The Civil Enforcement program's overarching goal is to protect human health and the environment, targeting enforcement actions according to degree of health and environmental risk, and noncompliance rates. The program works with the Department of Justice to ensure consistent and fair enforcement of all environmental laws and regulations. The program seeks to level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance, and to deter future violations. The civil enforcement program develops, litigates, and settles administrative and civil judicial cases against serious violators of environmental laws. In FY 2009, the Civil Enforcement program's proposed budget is $132.4 million.

EPA's criminal enforcement program investigates and helps prosecute environmental violations which seriously threaten public health and the environment and which involve intentional, deliberate or criminal behavior on the part of the violator. The criminal enforcement program deters violations of environmental laws and regulations by demonstrating that the regulated community will be held accountable, through jail sentences and criminal fines, for such violations. Bringing criminal cases sends a strong message for potential violators, enhancing aggregate compliance with laws and regulations. In FY 2009, the Criminal Enforcement program's proposed budget is $52.2 million.

Furthermore, the Agency's Enforcement and Compliance Assurance program uses compliance assistance and incentive tools to encourage compliance with regulatory requirements and reduce adverse public health and environmental problems. To achieve compliance, the regulated community must first understand its regulatory obligations and then learn how to best comply with them.

The Agency's Compliance Monitoring program reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions and settlement agreements, to determine whether conditions present imminent and substantial endangerment, and to analyze compliance rates. FY 2009 Compliance Monitoring activities will be both environmental media- and sector-based, and will also seek to begin addressing statistically valid compliance rates. The traditional media-based inspections complement those performed by states and tribes. They are a key part of our strategy for meeting the long-term and annual goals established for improving compliance in the air, water, pesticides, toxic substances, and hazardous waste environmental programs. As part of this program, the Agency reviews and responds to 100 percent of the notices for trans-boundary movement of hazardous waste, ensuring that these wastes are properly handled in accordance with international agreements and Resource Conservation and Recovery Act regulations. The proposed budget for Compliance Monitoring activities in FY 2009 is $97.2 million.

The Enforcement program addresses violations of environmental laws, to ensure that violators come into compliance with Federal laws and regulations and reduce pollution. In FY 2009, the program will achieve these environmental goals through consistent, fair, and focused enforcement of all environmental statutes. The overarching goal of the Enforcement program is to protect human health and the environment, targeting its actions according to degree of health and environmental risk. The program is considering utilizing analyses and evaluations of statistically valid compliance rates. In FY 2009, EPA will continue to implement its national compliance and enforcement priorities, which address the most widespread types of violations that also pose the most substantive health and environmental risks. In addition, in FY 2009 EPA anticipates reducing, treating, or eliminating an estimated 890 million pounds of pollutants building upon our achievements to date in reducing pollution through enforcement settlement agreements and compliance incentives by an estimated 4.5 billion pounds over the last six fiscal years.

Maximum compliance requires the active efforts of the regulated community. EPA's Audit Policy encourages corporate audits of environmental compliance and subsequent correction of self-discovered violations, providing a uniform enforcement response toward disclosures of violations. Under the Audit Policy, when companies voluntarily discover and promptly correct environmental violations, EPA may waive or substantially reduce civil penalties. Evaluation of the results of violations disclosed through self-reporting will occur in order to understand the effectiveness and accuracy of such self-reporting. Throughout FY 2009, EPA will continue to investigate options for encouraging self-directed audits and disclosures with particular emphasis on companies in the process of mergers and/or acquisitions. Also in FY 2009, EPA's Enforcement and Compliance Assurance program will continue to develop meaningful measures to assess the impact of enforcement and compliance activities and target areas that pose the greatest risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations.

EPA fulfills its uniquely Federal responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act by reviewing and commenting on other Federal agency Environmental Impact Statements (EISs), and making the comments available to the public. NEPA requires that Federal agencies prepare and submit EISs to identify potential environmental consequences of major proposed activities and develop plans to mitigate or eliminate adverse impacts. The FY 2009 NEPA budget is $16.3 million.

Improving Environmental Performance through Innovation and Pollution Prevention and Stewardship

In FY 2009, with a budget of $18.4 million, the Pollution Prevention program will continue being one of the Agency's primary tools for minimizing and preventing adverse environmental impacts by preventing the generation of pollution at the source. Through pollution prevention integration, EPA will work to bring about a performance-oriented regulatory system that develops innovative, flexible strategies to achieve measurable results; promotes environmental stewardship in all parts of society; supports sustainable development and pollution prevention; and fosters a culture of creative environmental problem-solving. In total, the Agency proposes

$107 million to improve environmental performances through pollution and other stewardship practices.

- **Partnering with Businesses and Consumers:** In FY 2009, through the Pollution Prevention (P2) program, EPA will promote stronger regional partnerships and geographically tailored approaches to address unique community problems. Also in FY 2009, EPA will continue to encourage, empower, and assist government and business to "green" the nation's supply and demand structures to make them more environmentally sound. Through the Environmentally Preferable Purchasing Program, the Agency will provide enhanced guidance to the Federal building community on model green construction specifications and help Federal agencies identify and procure those products that generate the least pollution, consume fewest non-renewable natural resources, and constitute the least threat to human health and to the environment. EPA's innovative Green Suppliers Network Program works with large manufacturers to increase energy efficiency; identify cost-saving opportunities; optimize resources and technology through the development of sound business approaches incorporating pollution prevention; and to promote those approaches among their numerous suppliers. P2 grants to states and tribes enable them to provide technical assistance, education and outreach to assist businesses and industries in identifying strategies and solutions to reduce wastes and pollution at the source. The importance of tracking outcomes from P2 grants has been reinforced by adding key P2 environmental outcome targets to program guidance reporting measures.

  In FY 2009, through the National Partnership for Environmental Priorities (NPEP), the Agency will continue to reduce priority chemicals in wastes. As of August 2007, the NPEP program has obtained industry commitments for 6.5 million pounds of priority chemical reductions through 2011. Reductions will be achieved primarily through source reduction made possible by safer chemical substitutes.

- **Promoting Innovation and Stewardship:** In FY 2009, EPA will work to bring about a performance-oriented regulatory system that develops innovative, flexible strategies to achieve measurable results; promote environmental stewardship in all parts of society; support sustainable development and pollution prevention; and foster a culture of creative environmental problem-solving.

The Performance Track (PT) program will improve program reporting, develop and implement national and regional challenge commitments, and leverage state environmental leadership programs by aligning PT with 20 state programs. In addition, EPA will sponsor a formal program evaluation of the program in FY 2009.

Also in FY 2009, EPA will continue to grow its partnerships and track environmental performance trends with major manufacturing sectors, such as steel, cement, forest products, and shipbuilding, plus important non-manufacturing sectors like agribusiness, construction, and ports. The Agency will address barriers to improved performance, provide sector-specific "drivers" for continuous improvement and stewardship, and use the partnerships to tackle high priority environmental issues.

EPA will also continue to promote environmental performance through the Environmental Results Program (ERP), a state-run program promoting environmental performance and efficiency through assistance and incentives to both states and businesses. In FY 2009, EPA will support the growing demand for the ERP program beyond the 16 States and 10 sectors currently active in the program.

Finally, EPA will continue the State Innovation Grant program in FY 2009, which provides support to states, allowing them to develop their own innovative approaches, including flexible permitting, ERP, and environmental leadership programs (e.g. PT). Measurement and program evaluation also will continue to be priorities.

Improve Human Health and the Environment in Indian Country

Since adopting the EPA Indian Policy in 1984, EPA has worked with tribes on a government-to-government basis in recognition of the Federal government's trust responsibility to Federally-recognized tribes. EPA will continue to work with Tribal communities in FY 2009 with a budget of $80.2 million directed to Tribal programs. Under Federal environmental statutes, the Agency is responsible for protecting human health and the environment in Indian Country. EPA's American Indian Environmental Office (AIEO) leads an Agency wide effort to work with tribes, Alaska Native Villages, and inter-tribal consortia to fulfill this responsibility. EPA's strategy for achieving this objective has three major components:

- **Establish an Environmental Presence in Indian Country:** The Agency will continue to provide funding through the Indian General Assistance Program (GAP) so each Federally-recognized tribe can establish an environmental presence.

- **Provide Access to Environmental Information:** EPA will provide the information tribes need to meet EPA and Tribal environmental priorities, as well as characterize the environmental and public health improvements that result from joint actions.

- **Implementation of Environmental Goals:** The Agency will provide opportunities for the implementation of Tribal environmental programs by tribes, or directly by EPA, as necessary.

In FY 2009, GAP grants will build tribal environmental capacity to assess environmental conditions, utilize available information, and build an environmental program tailored to tribes' needs. The grants will develop environmental education and outreach programs, develop and implement integrated solid waste management plans, and alert EPA to serious conditions that pose immediate public health and ecological threats. Through GAP program guidance, EPA emphasizes outcome based results.

Sustainability

In total, the Agency proposes $51.2 million to enhance capacity for sustainability through science and research. EPA has developed and evaluated tools and technologies to monitor, prevent, control, and clean up pollution throughout its history. Since the Pollution Prevention

Act of 1990, the Agency has increasingly focused on preventative and sustainable approaches to health and environmental problems. EPA's efforts in this area support research specifically designed to address the issue of advancing sustainability goals – EPA's Science and Technology for Sustainability (STS) program.

Sustainable approaches require: innovative design and production techniques that minimize or eliminate environmental liabilities; integrated management of air, water, and land resources; and changes in the traditional methods of creating and distributing goods and services. And in addition to conducting research related to human health and environmental threats, EPA is committed to promoting sustainability—achieving economic prosperity while protecting natural systems and quality of life for the long term.

In FY 2009, EPA's Sustainability research program will embark on a new effort that is aimed at creating a suite of science-based sustainability metrics that are readily understood by the public. This work will address both large and small systems. In addition, the People, Prosperity, and Planet Award will support up to 50 student design projects from around the country, focusing on challenges in areas such as materials and chemicals, energy, resources, and water.

Recognizing that environmental policy and regulatory decisions will only be as good as the science upon which they are based, EPA makes every effort to ensure that its science is of the highest quality and relevance, thereby, providing the basis for sound environmental results. EPA uses the Research and Development Investment Criteria of quality, relevance, and performance in its decision-making processes through (a) the use of research strategies and plans, (b) peer review, and (c) program review and evaluation by the Board of Scientific Counselors (BOSC) and the Science Advisory Board.

FY 2006 PART

- EPA's Pollution Prevention Program, including the Categorical Grant Program, underwent PART review in FY 2006 and received a "moderately effective" rating.

Environmental Protection Agency
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APPROPRIATION: Science & Technology
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology					
Budget Authority	$728,339.9	$754,506.0	$760,084.0	$763,527.0	$3,443.0
Total Workyears	2,425.9	2,405.8	2,405.8	2,387.5	-18.3

Program Projects in S&T
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Air Toxics and Quality					
Clean Air Allowance Trading Programs	$8,661.1	$8,259.0	$9,115.0	$8,259.0	($856.0)
Federal Support for Air Quality Management	$9,104.1	$10,886.0	$12,118.0	$11,086.0	($1,032.0)
Federal Support for Air Toxics Program	$1,804.1	$2,252.0	$2,220.0	$2,303.0	$83.0
Federal Vehicle and Fuels Standards and Certification	$58,196.0	$65,722.0	$66,796.0	$69,543.0	$2,747.0
Radiation: Protection	$2,126.1	$2,120.0	$2,087.0	$2,109.0	$22.0
Radiation: Response Preparedness	$3,375.6	$3,721.0	$3,679.0	$4,016.0	$337.0
Subtotal, Air Toxics and Quality	$83,267.0	$92,960.0	$96,015.0	$97,316.0	$1,301.0
Climate Protection Program					
Climate Protection Program	$14,624.1	$13,104.0	$18,331.0	$11,402.0	($6,929.0)
Enforcement					
Forensics Support	$13,949.3	$15,075.0	$14,882.0	$15,557.0	$675.0
Homeland Security					
Homeland Security: Critical Infrastructure Protection					
Water Sentinel	$3,183.6	$21,884.0	$11,705.0	$22,637.0	$10,932.0
Homeland Security:	$7,391.8	$3,702.0	$3,652.0	$4,494.0	$842.0

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Critical Infrastructure Protection (other activities)					
Subtotal, Homeland Security: Critical Infrastructure Protection	$10,575.4	$25,586.0	$15,357.0	$27,131.0	$11,774.0
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	$21,025.2	$20,738.0	$20,444.0	$28,805.0	$8,361.0
Laboratory Preparedness and Response	$618.6	$600.0	$591.0	$500.0	($91.0)
Safe Buildings	$4,242.2	$4,000.0	$1,969.0	$2,000.0	$31.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$13,117.6	$15,430.0	$15,189.0	$14,905.0	($284.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$39,003.6	$40,768.0	$38,193.0	$46,210.0	$8,017.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$2,023.9	$594.0	$585.0	$594.0	$9.0
Subtotal, Homeland Security	$51,602.9	$66,948.0	$54,135.0	$73,935.0	$19,800.0
Indoor Air					
Indoor Air: Radon Program	$434.1	$428.0	$422.0	$441.0	$19.0
Reduce Risks from Indoor Air	$791.2	$788.0	$777.0	$790.0	$13.0
Subtotal, Indoor Air	$1,225.3	$1,216.0	$1,199.0	$1,231.0	$32.0
IT / Data Management / Security					
IT / Data Management	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$13,085.0	$35,521.0	$34,967.0	$35,521.0	$554.0
Utilities	$9,110.1	$18,392.0	$18,105.0	$18,547.0	$442.0
Security	$3,403.6	$11,179.0	$11,005.0	$11,989.0	$984.0
Facilities Infrastructure and Operations (other activities)	$7,287.5	$8,767.0	$8,630.0	$8,827.0	$197.0
Subtotal, Facilities Infrastructure and Operations	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Subtotal, Operations and Administration	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Pesticides Licensing					

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Pesticides: Protect Human Health from Pesticide Risk	$0.0	$3,294.0	$3,250.0	$3,453.0	$203.0
Pesticides: Protect the Environment from Pesticide Risk	$0.0	$2,115.0	$2,087.0	$2,216.0	$129.0
Pesticides: Realize the Value of Pesticide Availability	$0.0	$472.0	$465.0	$495.0	$30.0
Pesticides: Registration of New Pesticides	$2,570.3	$0.0	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$2,885.8	$0.0	$0.0	$0.0	$0.0
Subtotal, Pesticides Licensing	$5,456.1	$5,881.0	$5,802.0	$6,164.0	$362.0
Research: Clean Air					
Research: Air Toxics	$13,521.3	$0.0	$0.0	$0.0	$0.0
Research: Clean Air	$0.0	$81,054.0	$79,993.0	$80,588.0	$595.0
Research: Global Change	$20,449.9	$16,908.0	$19,688.0	$16,365.0	($3,323.0)
Research: NAAQS	$61,664.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Clean Air	$95,635.2	$97,962.0	$99,681.0	$96,953.0	($2,728.0)
Research: Clean Water					
Research: Drinking Water	$44,342.9	$48,548.0	$48,775.0	$45,283.0	($3,492.0)
Research: Water Quality	$54,428.5	$56,454.0	$55,573.0	$56,179.0	$606.0
Subtotal, Research: Clean Water	$98,771.4	$105,002.0	$104,348.0	$101,462.0	($2,886.0)
Research / Congressional Priorities					
Congressionally Mandated Projects	$16,456.4	$0.0	$5,316.0	$0.0	($5,316.0)
Research: Human Health and Ecosystems					
Human Health Risk Assessment	$35,018.0	$38,856.0	$38,334.0	$39,323.0	$989.0
Research: Computational Toxicology	$12,159.5	$15,103.0	$12,135.0	$14,863.0	$2,728.0
Research: Endocrine Disruptor	$10,476.7	$10,131.0	$10,317.0	$9,502.0	($815.0)
Research: Fellowships	$12,231.1	$8,438.0	$9,845.0	$8,887.0	($958.0)
Research: Human Health and Ecosystems					
Human Health	$0.0	$72,285.0	$77,260.0	$74,752.0	($2,508.0)
Ecosystems	$0.0	$72,761.0	$75,772.0	$69,990.0	($5,782.0)
Research: Human Health and Ecosystems (other activities)	$167,910.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Human	$167,910.0	$145,046.0	$153,032.0	$144,742.0	($8,290.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Health and Ecosystems					
Subtotal, Research: Human Health and Ecosystems	$237,795.3	$217,574.0	$223,663.0	$217,317.0	($6,346.0)
Research: Land Protection					
Research: Land Protection and Restoration	$10,907.3	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Research: Sustainability					
Research: Economics and Decision Science(EDS)	$2,284.9	$0.0	$0.0	$0.0	$0.0
Research: Environmental Technology Verification (ETV)	$1,410.1	$0.0	$0.0	$0.0	$0.0
Research: Sustainability	$24,864.5	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Subtotal, Research: Sustainability	$28,559.5	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Toxic Research and Prevention					
Research: Pesticides and Toxics	$29,425.2	$24,795.0	$24,459.0	$26,568.0	$2,109.0
Water: Human Health Protection					
Drinking Water Programs	$3,256.6	$3,416.0	$3,375.0	$3,559.0	$184.0
Subtotal, Drinking Water Programs	$3,256.6	$3,416.0	$3,375.0	$3,559.0	$184.0
TOTAL, EPA	$728,339.9	$754,506.0	$760,084.0	$763,527.0	$3,443.0

Program Area: Air Toxics And Quality

Clean Air Allowance Trading Programs
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$18,621.2	$19,388.0	$19,131.0	$19,898.0	$767.0
Science & Technology	***$8,661.1***	***$8,259.0***	***$9,115.0***	***$8,259.0***	***($856.0)***
Total Budget Authority / Obligations	$27,282.3	$27,647.0	$28,246.0	$28,157.0	($89.0)
Total Workyears	86.6	89.1	89.1	88.6	-0.5

Program Project Description:

The Clean Air Interstate Rule (CAIR) emissions allowance trading programs build upon the successful and cost-effective Acid Rain Sulfur Dioxide (SO_2) cap-and-trade program created in 1990. CAIR, promulgated on May 12, 2005, uses a multi-pollutant control approach to provide states with a solution to the problem of ozone and fine particulate matter ($PM_{2.5}$) -- pollution that drifts from one state to another. Using a market-based approach, CAIR is projected to achieve deep cuts in SO_2 and Nitrogen Oxides (NO_x) emissions. When fully implemented, CAIR will reduce SO_2 emissions in 28 eastern states and the District of Columbia by over 70 percent and NO_x emissions by over 60 percent from 2003 levels. Reductions in these emissions will lower both $PM_{2.5}$ and ozone.

CAIR provides a Federal framework requiring 28 states and the District of Columbia to reduce emissions of SO_2 and/or NO_x. These states contribute significantly to unhealthy levels of fine particles and ozone in downwind states. Under CAIR, annual emissions are permanently capped and there is an additional seasonal NO_x cap for states that contribute significantly to transported ozone pollution. These reductions will be substantial and cost-effective. In many areas, the reductions are large enough to meet the air quality standards; however, some areas may need to take additional local actions.

All of the affected states have indicated to EPA that they intend to achieve the mandated reductions primarily by controlling power plant emissions through an EPA-administered interstate cap-and-trade program. By enabling states to cost-effectively reduce air pollutants from power plants, CAIR will protect public health and the environment without interfering with the steady flow of affordable energy for American consumers and businesses. For additional information on CAIR, please visit http://www.epa.gov/oar/interstateairquality/.

On May 15, 2005, EPA promulgated the Clean Air Mercury Rule (CAMR), the first-ever Federal rule to reduce and permanently cap mercury emissions from coal-fired power plants. CAMR establishes "standards of performance" limiting mercury emissions from new and existing coal-fired power plants in two phases with caps. In the first phase, which begins in 2010, mercury

emissions nationwide will be reduced to 38 tons by taking advantage of "co-benefit" reductions—that is, mercury reductions achieved by reducing SO_2 and NO_x emissions under CAIR. In the second phase, due in 2018, coal-fired power plants will be subject to a second cap, which will reduce emissions to 15 tons upon full implementation.

Other important features of this landmark rule include: stringent emission monitoring and reporting requirements, a model cap-and-trade program that states can adopt to achieve and maintain their mercury emissions budgets, and significant penalties for noncompliance. CAMR also creates an EPA-administered market-based allowance trading program that states may join by adopting the model trading rule in state regulations or promulgating regulations that mirror the necessary components of the model trading rule. For additional information on CAMR, please visit http://www.epa.gov/oar/mercuryrule/.

EPA is responsible for managing the Clean Air Status and Trends Network (CASTNET), a national long-term atmospheric deposition monitoring network established in 1987 that serves as the nation's primary source for atmospheric data on the dry deposition component of total acid deposition, rural ground-level ozone and other forms of atmospheric pollution that enter the environment as particles and gases. Used in conjunction with the National Atmospheric Deposition Program (NADP) and other networks, CASTNET's long-term datasets and data products are used to determine the efficacy of national emission control programs through monitoring geographic patterns and temporal trends in ambient air quality and atmospheric deposition in rural areas of the country. Maintaining a robust long-term atmospheric deposition monitoring network is critical for the accountability of the Acid Rain Program, CAIR, and other programs for controlling transported air pollutants. The FY 2009 request level for CASTNET is $2.95M. For additional information on CASTNET, please visit http://www.epa.gov/CASTNET/.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will:

- Continue to provide litigation program support for CAIR and CAMR: Conduct legal, technical, and economic analyses to support timely implementation of these rules; continue assessing regulatory impacts on the U.S. economy, environment, small businesses, and local communities.

- Continue to assist states with CAIR implementation: Provide technical assistance to states in implementing state plans and rules for CAIR. Assist states in resolving issues related to source applicability, emissions monitoring and reporting, and the compliance supplement pool as well as provide technical support. Operate the CAIR annual NO_x emission reduction program beginning in FY 2009.

- Work with states and tribes on CAMR implementation: EPA will work with states and tribes on emissions monitoring provisions. Required mercury monitoring and reporting for CAMR begins in FY 2009. EPA also will assist the states and tribes, which elect to participate in the EPA-administered interstate CAMR allowance trading program, to establish allowance allocations and implement reconciliation procedures.

- Continue modifying data systems and operating infrastructure for CAIR/CAMR: Effective and efficient operation of these programs depends critically upon further development of the e-GOV infrastructure supporting the Acid Rain electronic allowance trading and emissions reporting systems. Data systems must be modified for mercury emissions reporting.

- Ensure accurate and consistent results for the program: Successful air pollution control and trading programs require accurate and consistent monitoring of emissions from affected sources. Work on performance specifications and investigate monitoring alternatives and methods to improve the efficiency of monitor certification and emissions data reporting, especially for mercury emissions and sources that are new to market-based control programs.

- Assist states considering Regional programs for Electric Generating Units (EGUs) outside of the CAIR Region: EPA will work with states to create cap-and-trade programs where they potentially could be more cost-effective than application of Best Available Retrofit Technology (BART).

Working with other Federal agency partners, EPA will continue developing a new framework for a coordinated network for monitoring atmospheric mercury that is scientifically credible and would have sites strategically located to meet CAMR accountability needs (e.g., in source-impacted areas).

In FY 2009, EPA will continue to work closely with the National Institute of Standards and Technology (NIST), Electric Power Research Institute (EPRI), and industry in the development, implementation, and commercialization of mercury Continuous Emissions Monitoring Systems (CEMS) and other source monitoring capability. In addition, the program will continue to provide analytical support for the interagency National Acid Precipitation Assessment Program (NAPAP). 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 2009, the program will continue analyzing the costs and benefits of the Acid Rain Program for inclusion in NAPAP's Integrated Assessment Report.

The National Ambient Air Quality Standards Federal program, PARTed in 2005, received a rating of "adequate." EPA is working to implement improvements, within current statutory limitations, that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority. The Air Quality Grants and Permitting Program, also PARTed in 2005, received a rating of "ineffective." The Agency has updated current grant allocation processes to ensure resources are properly targeted and is developing measures of program efficiency to be completed by December 2008. In 2003, OMB assessed the Acid Rain program, through the PART process, and gave it a rating of "moderately effective." EPA is working to develop a measure of program efficiency that takes into consideration the full cost of the program to be completed by December 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Tons of sulfur dioxide emissions from	Data Avail 2008	7,500,000	8,000,000	8,000,000	Tons Reduced

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	electric power generation sources					

Reducing emissions of SO_2 remains a crucial component of EPA's strategy for cleaner air. Particulate matter can be formed from direct sources (such as diesel exhaust or smoke), but can also be formed through chemical reactions. Emissions of SO_2 can be chemically transformed into sulfates, which are very tiny particles that can be carried, by winds, hundreds of miles. These same small particles are also a main pollutant that impairs visibility across large areas of the country, particularly national parks that are known for their scenic views.

EPA tracks the change in nitrogen deposition and sulfur deposition with performance targets set for every three years; the next report date is planned for FY 2010.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$856.0) A reduction in funding to the CASTNET will begin a phase down from "upgrade" of the network systems to operations and maintenance. The reduction also reflects expected decreased federal costs for CAIR/CAMR implementation as states gain knowledge and development of technology tool is completed and deployed. This also reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission. In addition, this change reduces a congressionally directed increase in the FY 2008 Omnibus. All priority activities in this program can be funded within base resources.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f).

Federal Support for Air Quality Management
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$95,576.0	$90,490.0	$89,464.0	$95,538.0	$6,074.0
Science & Technology	***$9,104.1***	***$10,886.0***	***$12,118.0***	***$11,086.0***	***($1,032.0)***
Total Budget Authority / Obligations	$104,680.1	$101,376.0	$101,582.0	$106,624.0	$5,042.0
Total Workyears	694.9	700.7	700.7	709.7	9.0

Program Project Description:

This program supports state development of the clean air plans through developing modeling and other tools. EPA works with states and local governments to ensure the technical integrity of the mobile source controls in the State Implementation Plans (SIPs) and transportation conformity determinations. Also, EPA assists states and local governments to identify the most cost-effective control options available.

FY 2009 Activities and Performance Plan:

As part of implementing the 8-hour ozone and fine particulate matter ($PM_{2.5}$) standards, EPA will continue to provide state and local governments with substantial assistance in developing SIPs and implementing the conformity rule during this period. In FY 2009, EPA will continue to ensure national consistency in how conformity determinations are conducted across the U.S. EPA will continue to ensure consistency in adequacy findings for motor vehicle emissions budgets in air quality plans, which are used in conformity determinations. EPA will continue to work with state and local transportation and air quality agencies to ensure that $PM_{2.5}$ hot-spot analyses are conducted in a manner consistent with the transportation conformity regulation and guidance. In addition, EPA will work with states and local governments to ensure the technical integrity of the mobile source controls in the SIPs for the 8-hour ozone and $PM_{2.5}$ air quality. EPA also will assist areas in identifying the most cost-effective control options available and provide guidance, as needed, for areas that implement conformity.

EPA will partner with states, tribes, and local governments to create a comprehensive compliance program to ensure that vehicles and engines pollute less. EPA will use advanced in-use measurement techniques and other sources of in-use data to monitor the performance of On-board Diagnostics (OBD) systems on vehicle models to make sure that OBD is a reliable check on the emissions systems. In FY 2007, basic and/or enhanced vehicle Inspection/Maintenance testing was being performed in over 30 states with technical and programmatic guidance from EPA. In FY 2009, EPA will continue to assist states in bringing operating programs toward the future to deal with new fuel, vehicle, and technology requirements.

EPA will continue to assist state, Tribal, and local agencies in implementing and assessing the effectiveness of national clean air programs via a broad suite of analytical tools. For more information visit: http://www.epa.gov/ttn/.

The National Ambient Air Quality Standards (NAAQS) Federal program, PARTed in 2005, received a rating of "adequate." EPA is working to implement improvements, within current statutory limitations, that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority by December 2008. The Air Quality Grants and Permitting Program, also PARTed in 2005, received a rating of "ineffective." EPA is working to update current grant allocation processes to ensure resources are properly targeted and also is developing program efficiency measures by December 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.	Data Avail 2008	3	4	5	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	Data Avail 2008	6	8	10	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	Data Avail 2008	0	-1.2	-2.4	Percentage

EPA, collaborating with the states, will be implementing Federal measures and assisting with the development of clean air plans to continue to improve air quality as measured by the air quality index and other measures.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$177.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$169.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will assist states, tribes and localities in developing clean air plans.

- (-$1,378.0) The FY 2008 Omnibus Appropriation provided directed funding for the San Joaquin Valley Air Pollution Control District to complete the Central California Ozone Study. This change reduces a congressionally directed increase in the FY 2008 Omnibus. All priority activities in this program can be funded within base resources.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f); Motor Vehicle Information Cost Savings Act; Alternative Motor Fuels Act of 1988; National Highway System Designation Act; NEP Act, SAFETEA-LU of 2005.

Federal Support for Air Toxics Program
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$25,081.8	$24,711.0	$24,390.0	$22,693.0	($1,697.0)
Science & Technology	***$1,804.1***	***$2,252.0***	***$2,220.0***	***$2,303.0***	***$83.0***
Total Budget Authority / Obligations	$26,885.9	$26,963.0	$26,610.0	$24,996.0	($1,614.0)
Total Workyears	141.2	141.8	141.8	141.8	0.0

Program Project Description:

Federal support for the air toxics program includes a variety of tools to help characterize the level of risk to the public and measure the Agency's progress in reducing this risk. The program will develop and provide information and tools to assist state, local, and Tribal agencies as well as communities to reduce air toxics emissions and risk specific to their local areas.

Reductions in emissions of mobile source air toxics, such as diesel particulate matter (PM), are achieved through innovative and voluntary approaches working with state, local, and Tribal governments as well as a variety of stakeholder groups. This program also includes activities related to the Stationary Source Residual Risk Program. (For more information visit: http://www.epa.gov/ttn/atw/rrisk/residriskpg.html)

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to work with a broad range of stakeholders to develop incentives for different economic sectors (construction, ports, freight, and agriculture) to address the emissions from existing diesel engines. Work is being done across these sectors at the national and regional level to clean up the existing fleet. Reducing emissions from diesel engines will help localities meet the Agency's Ambient Air Quality Goals and reduce exposure to air toxics from diesel engines. EPA also has developed several emissions testing protocols that will provide potential purchasers of emission control technology a consistent, third party evaluation of emission control products. EPA has developed partnerships with state and local governments, industry, and private companies to create project teams to help fleet owners create the most cost-effective retrofit programs.

EPA also will continue to provide technical expertise and support to state, local, and Tribal air toxics programs in assessing and reducing mobile source air toxics. This support includes models and other assessment tools; guidance on the application of such tools for evaluating impacts of proposed transportation facilities; guidance on the benefits of voluntary mobile source control programs; and other education and outreach materials.

EPA will work with partners to develop improved emission factors and inventories, including a better automated, higher-quality 2008 National Emissions Inventory (NEI) database with an expected completion date of July 2009. This effort will include gathering improved activity databases and using geographic information systems (GIS) and satellite remote sensing, where possible, for key point, area, mobile and fugitive source categories and global emission events.

The Air Toxics program, re-assessed by OMB in 2004 through the PART process, received a rating of "adequate." EPA is working on improving monitoring systems to fill data gaps and get a better assessment of actual population exposure to toxic air pollution.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2009	35	35	36	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2009	58	59	59	Percentage

Performance targets for reduction of toxicity weighted emissions are also supported by work under the Federal Stationary Source Regulations program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$20.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$63.0) This increase will help states address local air toxics issues and reflects restoration of the FY 2008 Omnibus 1.56% rescission.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f).

Federal Vehicle and Fuels Standards and Certification
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$58,196.0***	***$65,722.0***	***$66,796.0***	***$69,543.0***	***$2,747.0***
Total Budget Authority / Obligations	$58,196.0	$65,722.0	$66,796.0	$69,543.0	$2,747.0
Total Workyears	285.1	295.2	295.2	304.2	9.0

Program Project Description:

The most common mobile sources of air pollution are highway motor vehicles and their fuels. Other mobile sources, such as airplanes, ships, construction equipment and lawn mowers also produce significant amounts of pollutants. EPA regulates all of these sources to reduce the production of air pollution. The Agency also provides emissions and fuel economy information for new cars, funds grants for the development of cleaner burning fuels and alternative energy sources, and educates consumers on the ways their actions affect the environment.

Primary responsibilities include: developing national regulatory programs to reduce mobile source-related air pollution from light-duty cars and trucks, heavy-duty trucks and buses, nonroad engines and vehicles and their fuels; evaluating emission control technology; and providing state and local air quality regulators and transportation planners with access to critical information on transportation programs and incentive-based programs. Other activities include testing vehicles, engines and fuels, and establishing test procedures for and determining compliance with Federal emissions and fuel economy standards.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to support implementation of the Tier II light-duty (LD) vehicle program, the 2007-2010 Heavy-Duty (HD) Diesel standards, and the Non-Road Diesel Tier 4 standards (and earlier nonroad standards) in order to ensure the successful delivery of cleaner vehicles, equipment, and fuel. In-use compliance is an important element of EPA's regulatory programs ensuring that new engine standards are actually met under real-world conditions. EPA will continue implementation of a manufacturer-run in-use compliance surveillance program for highway heavy-duty diesel, locomotive, marine spark ignition (SI) and large SI engines. EPA also will continue the implementation of the Renewable Fuels Standards (RFS) rule promulgated in 2007, as well as several other actions required by the Energy Policy Act (EPAct) of 2005. Some of these EPAct actions include a study of the changes in emissions of air pollutants and air quality, and a fuel system harmonization study in coordination with DOE. In addition the recently signed Energy Independence and Security Act (EISA) will dramatically expand the renewable fuels provisions of EPAct and will require additional EPA studies in various areas of renewable fuel use.

Other FY 2009 implementation activities include the implementation of the new fuel economy labelling program finalized in 2006, which required EPA to re-evaluate the fuel economy test methods every five years to ensure that the test methods stay current with changes in vehicle technologies. In FY 2009, EPA will begin evaluating fuel economy data to support the required review in 2011. EPA also will be conducting follow-up implementation work related to the mobile source air toxics rulemaking in preparation for the 2011 program start date (work includes the assessment of refineries' pre-compliance reports and early credit generation, in order to monitor the viability of the benzene credit market). The Agency also will start implementation activities for the Locomotives/Marine rule recently finalized in 2008, as well as for small gasoline engine standards beginning with model year 2009.

In FY 2009, EPA will promulgate more stringent NOx and PM emission standards for ocean-going vessels. The designation of U.S. coastal areas as SOx Emission Control Areas (SECA) pursuant to MARPOL Annex VI fuel sulfur provisions also will be critical to achieving PM reductions from ocean-going vessels, most of which are foreign flagged. In 2009, EPA will be completing the request for SECA designation to the International Maritime Organization (IMO). This request will include analysis of air quality data and estimation of benefits and economic impact.

Several important actions for nonroad diesel engines also will take place in 2009. To meet the new nonroad diesel standards, engine manufacturers will produce engines that are going to be more complex and dependent on electronic controls, similar to highway engines. Nonroad On-Board Diagnostics (OBD) requirements are needed to ensure that engines are properly maintained and compliant, ensuring that the full benefits of the emission standards are realized in-use. A nonroad OBD rule will be promulgated in 2009.

In addition, EPA will promulgate a rule establishing an in-use compliance surveillance programs for nonroad diesel engines, as agreed upon in the settlement with the Engine Manufacturers Association. This program is vital to ensuring that new engine standards are actually met in-use under real-world conditions. Other new nonroad programs include: a motorcycle rulemaking to establish engine certification procedures, confirm 2010 standards, and establish standards and test cycles for world harmonized test procedures; a rulemaking to review and revise the long-term emission standard for snowmobiles as required by court order; and a rulemaking action to propose adoption of international NOx standards for jet turbine engines that would align Federal rules with international requirements.

EPA's emission models provide the overarching architecture that supports EPA's regulatory programs, generating emission factors and inventories needed to quantify emission reductions. In FY 2009, will begin utilizing the new mobile source emission model, MOVES. The Motor Vehicle Emission Simulator (MOVES) will greatly improve the Agency's ability to support the development of emission control programs, as well as provide support to states in their determination of program needs to meet air quality standards.

EPA's National Vehicle and Fuel Emissions Laboratory (NVFEL) conducts testing operations on motor vehicles, heavy-duty engines, nonroad engines, and fuels to certify that all vehicles, engines, and fuels that enter the US market comply with all Federal clean air and fuel economy

standards. The NVFEL lab will continue to conduct vehicle emission tests as part of pre-production tests, certification audits, in-use assessments, and recall programs to support mobile source clean air programs. Tests are conducted on a spot check basis on motor vehicles, heavy-duty engines, non-road engines, and fuels to: 1) certify that vehicles and engines meet Federal air emission and fuel economy standards; 2) ensure engines comply with in-use requirements; and 3) ensure fuels, fuel additives, and exhaust compounds meet Federal standards. In FY 2009, EPA will continue to conduct testing activities for fuel economy, Tier II testing, reformulated gasoline, future fleets, alternative fuel vehicle conversion certifications, OBD evaluations, certification audits, and recall programs. In addition to these testing activities, EPA also will be expanding its compliance testing of heavy-duty and non-road engines.

EPA will review and approve approximately 4,000 vehicle and engine emissions certification requests, including light-duty vehicles, heavy-duty diesel engines, nonroad engines, marine engines, locomotives and others. This represents a significant expansion in EPA's certification burden over previous years, due in part to the addition of certification requirements for stationary engines and evaporative emission certification requirements for marine and small spark-ignited engines. Certification and compliance of advanced technologies such as plug-in hybrid electric vehicles and light-duty diesel applications will also be a major focus in FY 2009. The Agency also will continue to review the in-use verification program data submitted by vehicle manufacturers to determine whether there are any emissions compliance issues. In addition, EPA will continue to expand its web-based compliance information system to be used by manufacturers and EPA staff to house compliance data for all regulated vehicles and engines. Implementation of CAFE standards for light-duty trucks also will be an area of focus for EPA in FY 2009, as new standards come into place. Work also will continue on activities for Light-Duty (LD), Heavy-Duty (HD) and Nonroad (NR) sectors.

In FY 2009, EPA expects to expend significant resources on ensuring compliance with certification as well as in–use requirements for foreign-built engines and equipment. EPA also will continue the implementation of fuels regulatory requirements such as Reformulated Fuel Standards (RFS), Ultra Low Sulfur Diesel (ULSD), Gasoline Sulfur, and Air Toxics.

Through the World Summit on Sustainable Development WSSD partnerships with developing countries EPA will continue addressing the impact to human health and the environment from motor vehicles in developing countries. EPA will continue to focus its efforts on two priorities: completing the global elimination of lead from gasoline; and reducing sulfur in diesel and gasoline, while concurrently introducing cleaner vehicle technologies. These emissions reductions will reduce pollution that is transported across our borders and the northern hemisphere into the United States, providing important air quality and public health benefits to the United States.

The Mobile Sources program was assessed in 2004 through the PART process, and rated as "moderately effective." EPA is collecting data to better monitor efficiency improvements, and is systematically analyzing and evaluating regulations to ensure effectively achieving the greatest benefits.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Tons of PM-10 Reduced since 2000 from Mobile Sources	Data Avail 2008	87,026	99,458	110,190	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	Data Avail 2008	1.18M	1.35M	1.52M	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	Data Avail 2008	1.20M	1.37M	1.54M	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources	Data Avail 2008	2.37M	2.71M	3.05M	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Tons of PM-2.5 Reduced since 2000 from Mobile Sources	Data Avail 2008	85,704	97,947	110,890	Tons

EPA will continue to achieve results in reducing pollution from mobile sources, especially NOx emissions. The Tier 2 Vehicle program, which took effect in 2004, will make new cars, SUVs, and pickup trucks 77 to 95 percent cleaner than 2003 models. The Clean Trucks and Buses program, which began in 2007, will make new highway diesel engines as much as 95 percent cleaner than current models. Under the Non-road Diesel program, new fuel and engine requirements will reduce sulfur in off-highway diesel by more than 99 percent by 2010. Combined, these measures will prevent over 22,000 premature deaths each year, reduce millions of tons of pollution a year, and prevent hundreds of thousands of respiratory illnesses.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$318.0) This increase will support implementation of on-going requirements for the renewable fuels standard (RFS) program under the Energy Policy Act of 2005 and support development and implementation of new renewable fuel program requirements that were greatly expanded under the recently passed Energy Independence and Security Act (EISA) of 2007. This increase also includes restoration of the FY 2008 Omnibus 1.56% rescission.

- (+9.0 FTE) This reflects a 9.0 total workyears increase and $1,138.0 in payroll to support the new program priorities described above, including the total workyears needed to handle the large new workload created by RFS and EISA fuels reporting and tracking requirements.

- (+$138.0) This increase is associated with increased programmatic laboratory fixed costs.

- (+$2,291.0) This reflects an increase for payroll and cost of living for all FTE.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f); MVICSA; AMFA of 1988; NHSDA; NEPA; EPC Act; and EPA of 2005; EISA of 2007.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$10,172.7	$10,186.0	$10,057.0	$10,533.0	$476.0
Science & Technology	***$2,126.1***	***$2,120.0***	***$2,087.0***	***$2,109.0***	***$22.0***
Hazardous Substance Superfund	$1,960.9	$2,373.0	$2,342.0	$2,414.0	$72.0
Total Budget Authority / Obligations	$14,259.7	$14,679.0	$14,486.0	$15,056.0	$570.0
Total Workyears	89.2	88.6	88.6	88.6	0.0

Program Project Description:

This program supports the maintenance of an on-going radiation protection capability at the National Air and Radiation Environmental Laboratory (NAREL) located in Montgomery, Alabama, and the Radiation and Indoor Environments National Laboratory (R&IE) located in Las Vegas, Nevada. These laboratories provide radioanalytical and mixed waste testing and analysis of environmental samples to support site assessment, clean-up, and response activities.

Both labs provide technical support for conducting site specific radiological characterizations and clean-ups, using the best available science to develop risk assessment tools. The labs also develop guidance for cleaning up sites that are contaminated with radioactive materials in collaboration with the public, industry, states, Tribes, and other governments. EPA, in partnership with other Federal agencies, promotes the management of radiation risks in a consistent and safe manner.

FY 2009 Activities and Performance Plan:

In FY 2009 EPA, in cooperation with state and local governments, and other Federal agencies, will assist with site characterizations and provide analytical support for site assessment activities, remediation technologies, and measurement and information systems. EPA also will provide training and direct site assistance including laboratory, field, and risk assessment support at sites with actual or suspected radioactive contamination.

EPA's laboratories will provide radiological and technical support to EPA Superfund Remedial Project Managers and On-Scene Coordinators, the public, industry, Tribes and state and local governments. EPA also will conduct radioanalytical and mixed waste analyses in support of Regional site assessments, cleanups and response activities.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Percentage of most populous US cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations.	80	87	85	90	Percentage

EPA expects to be on track through its ongoing work to accomplish its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure. The Office of Management and Budget (OMB) recently approved several outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets. The Radiation Program received a rating of "moderately effective."

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$41.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$19.0) This change reflects the net effect of the restoration of the 1.56% rescission to all program projects and small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

AEA of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; CAA Amendments of 1990; CERCLA, as amended by the SARA of 1986 ; EPA of 1992, P.L. 102-486; Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980; NWPA of 1982; PHSA, as amended, 42 U.S.C 201 et seq.; SDWA; UMTRCA of 1978; WIPP Land Withdrawal Act.

Radiation: Response Preparedness
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Radiation

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$2,809.7	$2,928.0	$2,882.0	$2,941.0	$59.0
Science & Technology	***$3,375.6***	***$3,721.0***	***$3,679.0***	***$4,016.0***	***$337.0***
Total Budget Authority / Obligations	$6,185.3	$6,649.0	$6,561.0	$6,957.0	$396.0
Total Workyears	39.1	42.3	42.3	42.3	0.0

Program Project Description:

The National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama, and the Radiation and Indoor Environments National Laboratory (R&IE) in Las Vegas, Nevada, provide field sampling and analyses, laboratory analyses, and direct scientific support to respond to radiological and nuclear incidents. This includes measuring and monitoring radioactive materials and assessing radioactive contamination in the environment. This program comprises direct scientific field and laboratory activities to support preparedness, planning, training, and procedures development. In addition, selected staff are members of EPA's Radiological Emergency Response Team (RERT) and are trained to provide direct expert assistance in the field.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's RERT, a component of the Agency's emergency response program, will ensure its preparedness in the laboratories for radiological incidents including those for which EPA is the Coordinating Agency under the National Response Plan. The laboratory RERT members will conduct training and exercises to enhance and demonstrate their ability to fulfill EPA responsibilities in the field, using mobile analytical systems, and in the fixed labs; and in order to provide the necessary mix of rapid and accurate radionuclide analyses in environmental matrices.[1]

Also in FY 2009, the labs will continue to develop rapid-deployment capabilities to ensure that field teams are ready to provide scientific data, analyses and updated analytical techniques for radiation emergency response programs across the Agency. The labs will maintain readiness for radiological emergency responses, participate in emergency exercises; provide on-site scientific support to state radiation, solid waste, and health programs that regulate radiation remediation; participate in the Protective Action Guidance (PAG) development and application; and respond, as required, to radiological incidents.

[1] Additional information can be accessed at: http://www.epa.gov/radiation/rert/ last accessed 7/25/2007.

Performance Targets:

EPA expects to be on track through its ongoing work to accomplish its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure. The Office of Management and Budget (OMB) recently approved several outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets. The Radiation Program received a rating of "moderately effective." This program project supports other related program projects; there are no specific measures for this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$241.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$19.0) This increase is associated with increased programmatic laboratory fixed costs.
- (+$77.0) This increase reflects continued support for emergency response activities and the restoration of the 1.56% rescission to all program projects.

Statutory Authority:

AEA of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; CAA Amendments of 1990; CERCLA as amended by the SARA; 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; PHSA, as amended, 42 U.S.C 201 et seq.; Robert T. Stafford Disaster Relief and EAA, as amended, 42 U.S.C 5121 et seq.; SDWA; and Title XIV of the NDAA of 1997, PL 104-201 (Nunn-Lugar II).

Program Area: Climate Protection Program

Climate Protection Program

Program Area: Climate Protection Program
Goal: Clean Air and Global Climate Change
Objective(s): Reduce Greenhouse Gas Intensity

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$91,252.1	$87,927.0	$90,374.0	$87,008.0	($3,366.0)
Science & Technology	***$14,624.1***	***$13,104.0***	***$18,331.0***	***$11,402.0***	***($6,929.0)***
Total Budget Authority / Obligations	$105,876.2	$101,031.0	$108,705.0	$98,410.0	($10,295.0)
Total Workyears	222.7	212.5	212.5	213.0	0.5

Program Project Description:

EPA manages the Clean Automotive Technology (CAT) and the Fuel Cell and Hydrogen programs which are designed to help recognize and remove barriers in the marketplace, and to more rapidly deploy technology into the transportation sector of the economy. The Agency's Clean Automotive Technology program develops advanced clean and fuel-efficient automotive technology to better protect the environment and save energy. (For more information visit: http://www.epa.gov/otaq/technology).

The emphasis of Clean Automotive Technology program work will be research and collaboration with the automotive, trucking, and fleet industries. Through cooperative research and development agreements (CRADA), EPA plans to continue demonstrating its unique hydraulic hybrid technology and advanced clean-engine technologies in vehicles, such as large SUVs, pickup trucks, urban delivery trucks, school buses, shuttle buses, and refuse trucks. By 2009, EPA hydraulic hybrid technology will be installed in _8 different kinds of prototype demonstration vehicles each targeting a different vocation / industry. The intent of these real world demonstrations is to lead to the initial commercial introduction of significant elements of EPA's technologies by vehicle manufacturers. EPA's goal is to achieve initial commercialization of urban delivery trucks in 2010.

FY 2009 Activities and Performance Plan:

In FY 2009, the Clean Automotive Technology Program will:

- Continue the transfer of EPA's advances in hydraulic hybrid technologies (promote adoption of technology and technical assistance), providing continuity in EPA's commitments to the truck and fleet industry for development and deployment. And the transfer of EPA's advances in clean diesel combustion technologies (promote adoption of technology and technical assistance), providing continuity in EPA's commitments to the automotive and truck industry for development and deployment.

- Continue field tests currently underway and planned for hydraulic-hybrid and clean engine technologies achieving better fuel economy than the typical baseline vehicles.

- Continue demonstration of the effectiveness of the Clean Automotive Technology Program's high-efficiency, clean combustion E-85/M-85 alcohol engine in a hydraulic hybrid vehicle.

The FY 2009 Budget Request for the Clean Automotive Technology program totals $11.4 million.

In FY 2009, the Fuel Cell and Hydrogen Program will:

- Continue to coordinate with key stakeholders through the public/private California Fuel Cell Partnership to facilitate the commercialization of innovative technologies.

Performance Targets:

OMB assessed the Climate Change Program in 2004 through the PART process, and gave it a rating of "adequate." EPA is working through its technology transfer demonstration projects with industry to develop performance data which definitively quantifies the "real-world" greenhouse gas reduction potential of these clean automotive technologies. Initial "real-world" test data will begin coming in from the various demonstration programs with industry in 2009. The Agency will use the data to develop performance measuresfor the Clean Automotive Technologies program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$5014.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and reduces congressionally directed funding provided in the FY 2008 Omnibus for the Clean Automotive Technology Program.

- (-$2,000.0) This reduction reflects a decrease in Federal investment in the Clean Automotive Technology program which is also provided by the private sector and the Department of Energy. However, by 2009, EPA hydraulic hybrid technology will be installed in 8 different kinds of prototype demonstration vehicles each targeting a different vocation / industry.

- (-$50.0) This decrease reflects a consolidation of program evaluation efforts in the Office of the Administrator.

- (+$135.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align, resources, skills and Agency priorities.

Statutory Authority:

CAA Amendments, 42 U.S.C. 7401 et seq. - Sections 102, 103, 104, and 108; Pollution Prevention Act, 42 U.S.C. 13101 et seq. - Sections 6602, 6603, 6604, and 6605; NEPA, 42 U.S.C. 4321 et seq. - Section 102; Global Climate Protection Act, 15 U.S.C. 2901 - Section 1103; FTTA, 15 U.S.C. - Section 3701a.

Program Area: Enforcement

Forensics Support
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Enhance Societies Capacity for Sustainability through Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$13,949.3***	***$15,075.0***	***$14,882.0***	***$15,557.0***	***$675.0***
Hazardous Substance Superfund	$2,805.2	$2,310.0	$3,750.0	$2,441.0	($1,309.0)
Total Budget Authority / Obligations	$16,754.5	$17,385.0	$18,632.0	$17,998.0	($634.0)
Total Workyears	97.0	105.8	105.8	105.8	0.0

Program Project Description:

The Forensics Support program provides specialized scientific and technical support for the nation's most complex civil and criminal enforcement cases and provides technical expertise for non-routine Agency compliance efforts. EPA's National Enforcement Investigations Center (NEIC) is the only accredited environmental forensics center in the nation. NEIC's Accreditation Standard has been customized to cover the civil, criminal, and special program work conducted by the program.

NEIC collaborates with other Federal, state, local, and Tribal enforcement organizations to provide technical assistance, consultation, on-site inspection, investigation, and case resolution activities in support of the Agency's civil enforcement program. In addition, the program coordinates with the Department of Justice and other Federal, state, and local law enforcement organizations to provide this type of science and technology support for criminal investigations.[2]

FY 2009 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2009 will include the refinement of process-based single and multi-media compliance monitoring investigation approaches, use of customized laboratory methods to solve unusual enforcement case challenges and applied research and development for both laboratory and field applications. In response to case needs, the NEIC will conduct applied research and development to identify, develop, and deploy new capabilities, test and/or enhance existing methods and techniques, and provide technology transfer to other enforcement personnel involving environmental measurement and forensic applications. As part of this activity, NEIC also will evaluate the scientific basis and/or technical enforceability of select EPA regulations that may impact program activities.

In FY 2009, the Forensics program will continue to function under more stringent International Standards Organization (ISO) requirements for environmental data measurements to maintain its accreditation. The program also will continue development of emerging technologies in field

[2] For more information, refer to: http://www.epa.gov/compliance/neic/index.html.

measurement and laboratory analytical techniques, as well as identifying sources of pollution at abandoned waste sites.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, at OMB's direction, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

One of the program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$781.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$106.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; Residential Lead-Based Paint Hazard Reduction Act (RLBPHRA); FIFRA; Ocean Dumping Act (i.e., MPRSA); EPCRA.

Program Area: Homeland Security

Homeland Security: Critical Infrastructure Protection
Program Area: Homeland Security
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$9,555.5	$7,787.0	$7,665.0	$6,759.0	($906.0)
Science & Technology	***$10,575.4***	***$25,586.0***	***$15,357.0***	***$27,131.0***	***$11,774.0***
Hazardous Substance Superfund	$1,637.2	$1,857.0	$1,828.0	$1,679.0	($149.0)
Total Budget Authority / Obligations	$21,768.1	$35,230.0	$24,850.0	$35,569.0	$10,719.0
Total Workyears	53.7	59.0	59.0	49.0	-10.0

Program Project Description:

This program provides resources to coordinate and support protection of the nation's critical water infrastructure from terrorist threats and all-hazard events. Reducing risk in the water sector requires a multi-step approach to: determine risk through vulnerability, threat, and consequence assessments; reduce risk through security enhancements; prepare to effectively respond to and recover from incidents; and measure the water sector's progress in risk reduction. Homeland Security Presidential Directives (HSPDs) 7 and 9 direct EPA to help the water sector implement protective measures and develop comprehensive water surveillance and monitoring programs. The Public Health Security and Bioterrorism Response and Preparedness Act of 2002 (Bioterrorism Act) also provides that EPA support the water sector in such activities. See http://www.epa.gov/safewater/watersecurity for more information.

FY 2009 Activities and Performance Plan:

EPA will continue to support the Water Security Initiative (WSI) pilot program and water sector-specific agency responsibilities, including the Water Alliance for Threat Reduction (WATR), to protect the nation's critical water infrastructure. The Agency also will continue progress to integrate the Regional laboratory networks and the WSI pilot laboratories into a national, consistent program. All of these efforts support the Agency's responsibilities and commitments under the National Infrastructure Protection Plan (NIPP), as defined within the Water Sector Specific Plan, which includes, for example, specific milestones for work related to the WSI, the Water Laboratory Alliance, and metric development.

The FY 2009 request includes $21.4 million for WSI and $1.3 million for WATR.

Water Security Initiative

HSPD-9 directs EPA to develop a "robust, comprehensive, and fully coordinated surveillance and monitoring system" for drinking water and a water laboratory network that would support

water surveillance and emergency response activities. The overall goal of the initiative is to design and demonstrate an effective system for timely detection and appropriate response to drinking water contamination threats and incidents through a pilot program that would have broad application to the nation's drinking water utilities in high threat cities.

WSI consists of five general components: (1) enhanced physical security monitoring, (2) water quality monitoring, (3) routine and triggered sampling for high priority contaminants, (4) public health surveillance, and (5) consumer complaint surveillance. Recent simulation analyses underscore the importance of a contaminant warning system that integrates all five components of event detection, as different contaminants are detected by different sequences of triggers or "alarms."

WSI is intended to demonstrate the concept of an effective contamination warning system that drinking water utilities in high threat cities of all sizes and characteristics could adopt. Resources appropriated to date have enabled EPA to implement an initial pilot for the WSI. EPA published interim guidance on designing contamination warning systems in FY 2007 and plans to release two additional documents which address consequence management planning and system operation in FY 2008. Grants for the second and third pilots are expected to be awarded in the second quarter of FY 2008. Requested FY 2009 funding for the program will support two additional pilots, bringing the total number of pilots to five. In addition, the FY 2009 funds will support technical assistance for the existing pilots, research efforts on evaluating chemical, biological, and radiological (CBR) analytical methods and event detection software, and assist in conducting outreach efforts to migrate lessons learned from the pilots to the water sector. In the out-years, EPA will focus on calibrating the contaminant warning systems and conducting extensive and thorough evaluations of each pilot. The Agency also will continue to prepare and refine a series of guidance documents for water utilities on designing, deploying, and testing contamination warning systems based on additional lessons learned from the pilots.

Each of the pilots will be subjected to extensive validation in the field. In the absence of an actual contamination event, much of the evaluation of the pilots will occur through reviewing, for example, the success of conducting sample analysis in response to a trigger. EPA will quickly share information learned from the pilots with other water utilities, rather than waiting for the pilots' conclusion before disseminating key results. Work will be carried out in collaboration with other Federal agencies, such as the Department of Homeland Security (DHS), Centers for Disease Control and Prevention, Department of Defense, and the U.S. Geological Survey.

Water Laboratory Alliance

In a contamination event, the sheer volume or unconventional type of samples will quickly overwhelm the capacity or capability of a single laboratory. To address this deficiency, the Water Laboratory Alliance (WLA) will establish an unprecedented network of labs by harnessing the range of existing lab resources from the local (e.g., water utility) to the Federal levels (e.g., CDC's Laboratory Response Network). The WLA will reduce the time necessary for confirming an intentional contamination event in drinking water and speed response and decontamination efforts. Implementation of the WLA, which is the drinking water portion of EPA's Environmental Laboratory Response Network, is progressing through the establishment of

Regional networks consisting of state public health and environmental laboratories, drinking water utilities, and EPA Regional laboratories that collectively will compose Regional laboratory response preparedness systems. Under the WLA, EPA also will validate methods for contaminants of high concern in drinking water, about 90% of which currently lack validated methods. EPA has established Regional Laboratory Response Plans and networks focused on drinking water contamination response for each of EPA's ten Regions. In FY 2009, the Agency will continue to build these Regional alliances to provide laboratories and utilities with access to supplemental analytical capability and capacity, improved preparedness for analytical support to an emergency situation, and coordinated and standardized data reporting systems and analytical methods.

Water Sector-Specific Agency Responsibilities

HSPD-7 designates EPA as the Sector-Specific Agency "responsible for infrastructure protection activities" for the water sector (drinking water and wastewater utilities). Under this directive, EPA is responsible for developing and providing tools and training on improving security to the 54,000 community water systems and 16,000 publicly-owned treatment works.

In FY 2009, EPA will work to ensure that water sector utilities have tools and information to prevent, detect, respond to, and recover from terrorist attacks, other intentional acts, and natural disasters. The following preventive and preparedness activities will be implemented for the water sector in collaboration with DHS and states' homeland security and water sector officials:

- Continue to develop and conduct exercises to prepare utilities, emergency responders, and decision-makers to evaluate and respond to physical, cyber, and contamination threats and events;
- Implement an effort to begin measuring the risk profile and security posture of the water sector so as to gauge the sector's current risk status, security countermeasures, and progress in reducing risk;
- Disseminate tools and provide technical assistance to ensure that water and wastewater utilities and emergency responders react rapidly and effectively to intentional contamination and other incidents. Tools include information on high priority contaminants, incident command protocols, sampling and detection protocols and methods, and treatment options;
- Support WATR through continuing to conduct additional training sessions for drinking water systems serving over 100,000 people; and
- Support the establishment of mutual aid agreements among utilities to improve recovery times.

Performance Targets:

Work under this program supports EPA's Protect Human Health objective. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$84.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$11,200.0) This increase reflects resources required in order to fully fund a cumulative total of five WSI pilots. These resources will assist drinking water utilities in the design and deployment of drinking water contamination warning systems designed to provide timely detection and appropriate response to a possible contamination incident. The Agency believes that 5 pilots are necessary in order to get a broad range of data so that utilities across the country will have applicable results to examine as they work to strengthen their contamination warning systems.

- (+$490.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SDWA; CWA; Public Health Security and Bioterrorism Emergency and Response Act of 2002; EPCRA.

Homeland Security: Preparedness, Response, and Recovery
Program Area: Homeland Security
Goal: Clean Air and Global Climate Change
Objective(s): Radiation

Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks; Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$3,394.3	$3,381.0	$3,329.0	$3,412.0	$83.0
Science & Technology	***$39,003.6***	***$40,768.0***	***$38,193.0***	***$46,210.0***	***$8,017.0***
Hazardous Substance Superfund	$50,318.1	$45,280.0	$44,629.0	$56,676.0	$12,047.0
Total Budget Authority / Obligations	$92,716.0	$89,429.0	$86,151.0	$106,298.0	$20,147.0
Total Workyears	166.7	167.6	167.6	174.2	6.6

Program Project Description:

Through research, development, and technical support activities, EPA's Homeland Security Research Program enhances the Nation's preparedness, response, and recovery capabilities for homeland security large-scale catastrophic incidents involving chemical, biological or radiological threats and attacks. EPA continues to assemble and evaluate tools and capabilities so that cost effective response approaches can be identified and evaluated for future use by the response community, elected and appointed decision makers, risk managers, and the public. Research will provide state-of-the-art approaches to address all phases of emergency response to ensure public and worker safety, protect property, and facilitate recovery to a safe state and resumption of normal activity. The Agency also continues to work with other Federal agencies and other organizations, through collaborative research efforts, to strengthen decontamination capabilities.

FY 2009 Activities and Performance Plan:

EPA homeland security research on chemical, biological, and radiological (CBR) contaminants will continue to fill critical gaps in our ability to effectively respond to and recover from threats, attacks, and large-scale catastrophic incidents. It will promote improved response capabilities and more informed decision making across government and industry in areas where EPA has unique knowledge and expertise related to decontamination and disposal of contaminated materials.

The goal of the FY 2009 Homeland Security Research Program is to deliver science and engineering research results to the program's customers to better facilitate and enable their ability to carry out their homeland security missions. Needs identified jointly with key customers are the primary factor used in prioritizing the research program's activities. Key

customers include EPA's Water Program, the Solid Waste and Emergency Response Program, and the Air Program. The research program will provide support and assist in interactions with water utilities to help ensure the security of the nation's water systems and safe drinking water. The research program is also increasing its responsiveness to the science needs of the EPA emergency response community (National Decontamination Team, Environmental Response Team, Radiological Emergency Response Team, Removal Managers, and On-Scene Coordinators). Research will be focused on providing tools and support to facilitate response to and recovery from large-scale catastrophic incidents. Along with this customer focus, the program has enhanced its communications throughout EPA's Homeland Security program and the Regional offices to ensure that needs are met and communicated and that areas of collaboration have been identified.

Decontamination Research:

EPA's decontamination research program directly supports EPA's National Response Plan (NRP) as well as the responsibilities assigned to the Agency in Homeland Security Presidential Directives (e.g., HSPD-7, HSPD-9, and HSPD-10). In many cases, the research program also supports the Department of Homeland Security's requirements for EPA expertise in a number of key areas including water infrastructure and materials decontamination and disposal. Activities in FY 2009 will include the following:

- Threat and consequence assessment research will focus on developing products and tools (such as filling critical gaps in toxicity databases) to provide information for rapidly assessing threats and risks to human health, aid decision-makers in assessing risks to human health from biological and chemical agents, and further identify research gaps. The information to be collected, generated, and evaluated includes information on the toxicity, infectivity, mechanism of action, fate, transport, and exposure consequences for biological agents. This information will be used to develop relationships of human response to varying doses of biological units (spores, cells, etc.) to assist in the development of cleanup goals. Research will continue to identify risks during incidents and to develop improved methods to communicate those risks to decision-makers and the public.

- EPA will continue to develop innovative methods and strategies and test commercially-available technologies to enhance the Nation's ability to detect, contain, decontaminate, and safely dispose of CBR warfare agents resulting from terrorist attacks in outdoor areas such as urban centers.

- To support the homeland security requirements under HSPDs 9 and 10, including the development of the Environmental Laboratory Response Network (ELRN), EPA will continue to expand the Standardized Analytical Methods (SAM) and create Reference Laboratory capability. SAM identifies high risk chemical, biological, and radiological agents and analytical methods for the ELRN that are required to document safe restoration exposure levels. Reference Labs serve as an authoritative source in the ELRN for method development, verification, and validation.

In addition, EPA plans to enhance the nation's ability to respond to a wide-area anthrax attack (i.e., an intentional anthrax release outdoors, in an airport, train station, or stadium). Increased resources are requested to strengthen research in the following areas:

- Development and adaptation of methods to test for anthrax including the extent of contamination and clearance following wide-area decontamination.

- Determination of deposition and adhesion properties of anthrax and its ability to re-aerosolize from materials common to wide-area settings.

- Development of methods to effectively decontaminate anthrax in wide area environments while minimizing the generation of waste.

- Development and adaption of methods and models for hazard and exposure assessments needed to determine risk-based clean up goals for anthrax.

Decontamination research will produce many science and engineering products in FY 2009 to support EPA's National Response Plan and first-responders in carrying out their homeland security missions. The following are several FY 2009 product highlights:

- Methods for real-time detection of anthrax and for rapid determination of its viability on surfaces and in environmental media.
- Report on the ability of anthrax to re-aerosolize from various wide-area materials.
- Methods to combine infectivity and exposure assessments into a scientifically defensible characterization of risk of humans exposed to anthrax.
- Conduct a full-scale demonstration of decontamination technologies shown to be efficacious in lab studies.
- Update *Support for Environmental Rapid Risk Assessment* (SERRA) database with the latest information on the effects to human health from bioterrorism and other warfare agents.
- Provisional Advisory Levels (PALs) for 15 chemicals to guide responders on human health risk of exposure to toxic industrial chemicals and chemical warfare agents.
- Expand *Disposal Decision Support Tool* to include guidance for the safe disposal of radioactive wastes and wastes from agroterrorism.

Water Infrastructure Protection Research:

Water Infrastructure Protection Research will focus on developing, testing, demonstrating, communicating, and implementing enhanced methods for detection, treatment, and containment of CBR agents and bulk industrial chemicals intentionally introduced into drinking water and wastewater systems. This is consistent with the Critical Infrastructure Protection Plan (CIPP) developed for water infrastructure and with the *Water Security Research and Technical Support Action Plan*. The program will produce many science and engineering products in FY 2009 to support EPA's Water Program and water utilities in carrying out their homeland security missions. The following are several FY 2009 product highlights:

- Computer tools to assess water utility vulnerabilities, optimally place sensors, and help to manage consequences of both terror and non-terror events.
- Cost effective online Total Organic Carbon (TOC) detector, essential to real-time monitoring of distribution systems.
- Decontamination approaches for water distribution systems
- Validated chemical Standard Analytical Protocols (SAP) for water.

Safe Buildings Research:

EPA's Safe Buildings research focuses on identifying, developing, and testing better, less expensive, and safer decontamination methods to facilitate building reoccupancy after a terrorist attack involving CBR agents. This research also involves developing procedures to use before and after an attack that would minimize the spread of contaminants inside a building, protect building occupants, and limit the area needing decontamination. An indoor contamination event typically results in a significant quantity of building decontamination residue and this research also addresses safe disposal of these residues. The program will produce science and engineering products in FY 2009 to support EPA's National Response Plan and first-responders in carrying out their homeland security missions. The following are FY 2009 product highlights:

- Performance information on commercially-available biological decontamination technologies to assist decision making on cleanup following an attack.
- Strategies to contain fumigants used in the decontamination of buildings.

Radiation Monitoring:

In the Nuclear/Radiological Incident Annex to the National Response Plan for Homeland Security, EPA's responsibilities include maintenance and enhancement of the RadNet air monitoring network. The network includes deployable monitors and near real-time stationary monitors. EPA also is responsible for maintenance of both fixed and mobile monitors, and personnel and asset readiness for radiological emergency responses, which includes participating in emergency response situations and providing technical expertise and support.

The Agency will continue to upgrade and expand the RadNet air monitoring network. These near real-time monitors will replace or augment the pre-existing system of 60 conventional air samplers. Fixed stations will operate routinely and in conjunction with as many as 40 deployable monitors following a radiological incident. Through FY 2009, EPA expects to install at least 100 monitors providing near real-time radiation monitoring coverage for over two-thirds of the most populous U.S. cities. As the RadNet air monitoring network is upgraded and expanded, response time and data dissemination will be reduced from days to hours and will provide the Agency and first responders with greater access to data, improving officials' ability to make decisions about protecting public health and the environment during and/or after an incident. Additionally, the data will be used by scientists to better characterize the effect of a radiological incident.

Improve National Radiological Lab Capacity and Capability:

In FY 2009, EPA will build upon work begun in FY 2006 to augment EPA's existing radiological laboratory to meet emerging homeland security needs and serve as the Agency's radiological reference laboratory. EPA will continue to upgrade the Agency's laboratory response capability which will include a network of "go-to" state laboratories to ensure a minimal level of surge capacity for radiological terrorism incidents; enhance the existing capability to conduct chemical and radiological analysis simultaneously; and coordinate the Radiological Emergency Response Team's sample handling protocols with the mobile triage units. Additionally, EPA will align and integrate related radiological activities with existing National Lab Networks. The Agency will continue a pilot project, begun in FY 2007, to improve state radiological laboratory capacity through provision of additional laboratory instruments, training, quality assurance testing, and audits of the selected state laboratories. EPA will continue to do audits and performance evaluation studies to assess and continually improve laboratory competency. As additional laboratories are audited, the number of available core laboratories that can support the Agency will increase. In addition, a template for a common radiological electronic data deliverable will be developed. This will help to ensure that the laboratories report the data in a common format, making the compilation of data from various laboratories more efficient.

Biodefense:

EPA will continue work to develop and validate methods to evaluate the efficacy of antimicrobial products against bioterrorism agents, expanding this work to address unique formulations, additional surface types, and additional bioterrorism agents and emerging pathogens. The Agency will address critical gaps in efficacy test methodology and knowledge of microbial resistance. In addition to vegetative bacteria, in FY 2009, EPA will address threatening viruses and other emerging pathogens in environmental media. EPA will invest in the development and evaluation of efficacy test protocols for products designed to control viruses in the environment during decontamination. The development of "decon toolboxes" for specific bioterrorism agents or classes of bacteria/viruses will continue into FY 2009.

In order to improve the Agency's ability to respond to events involving biothreat agents, EPA will increase the number of standardized and validated methods for evaluating the efficacy of decontamination agents. EPA will continue to seek independent third-party analysis for method validation efforts through recognized standard setting organizations. As new methods are developed, statistical modeling for various biodefense scenarios will be critical to the development of science based performance standards. Microbial persistence, resistance to antimicrobial agents, and an understanding of biofilm environments are also key factors in evaluating the efficacy of decontamination tools.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of water security initiatives.			100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	% of planned outputs delivered in support of support risk assessors and decision-makers in the rapid assessment of risk and the determination of cleanup goals and procedures following contamination			100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.			100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of establishment of the environmental National Laboratory Response Network			100	100	Percent

Work under this program supports multiple strategic objectives. In FY 2009, the program plans to meet its targets of completing and delivering 100% of its planned outputs in support of: 1) the efficient and effective clean-up and safe disposal of decontamination wastes, 2) the Water Security Initiative, 3) the rapid assessment of risk and the determination of clean-up goals and procedures following contamination, 4) the establishment of the National Laboratory Response Network, and 5) validated standardized methods for evaluating efficacy of antimicrobial products against a variety of biological pathogens. In achieving these targets, the program will contribute to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems.

EPA is on track through its ongoing work to meet its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure. EPA has developed new outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The Radiation Program received a rating of "moderately effective." The Office of Management and Budget provided two follow-up recommendations to the program. The first was for the program to develop an efficiency measure that demonstrates that the program utilizes total resources efficiently; this has been done. The second recommendation encourages EPA to explore where the RadNet environmental monitoring program best fits programmatically, in consultation with the Department of Homeland Security.

Beginning in 2006, EPA's Homeland Security Research Program has been assessed by OMB's PART as a component of other research program reviews.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$826.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$4,500.0) This reflects an increase to biodefense research related to anthrax including sampling, decontamination, and risk assessment methods and models to aid first responders in determining the extent of an outdoor release of anthrax as well as to aid in the identification of appropriate decontamination options.

- (+$500.0) EPA's pesticide decontamination program will focus on reducing gaps in laboratory networking and analytical capabilities related to biodefense research.

- (+$503.0 / +6.6 FTE) The majority of these FTE are a redirection from the Drinking Water Research program to provide support for the development of provisional advisory levels (PALs). This work will help to reduce uncertainty in the PAL determinations, validate key assumptions made in the absence of data, and identify and/or address key data gaps and research needs. Effects research associated with the Four Lab Study (a study of the effects of disinfection by-product [DBP] mixtures produced during water treatment using chlorination) is approaching completion and publication, so FTE previously active in this area can support the PAL efforts.

- (-$100.0) This reduction reflects completion of certain activities associated with increasing laboratory capability and capacity, such as acquiring updated radiological

monitoring equipment and constituting, equipping, and deploying two radiation response teams.

- (+$1,100.0) This increase provides funding for accelerated radiological threat agent analyses through increased lab and sampling capacity/capability. With increased funding, EPA will be able to respond to the next level of preparedness by being able to more effectively respond to multiple events. EPA will demonstrate results through field scale decontamination demonstrations and by increasing radiological sample throughput.

- (+$688.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970; CAA; CERCLA; SARA; 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; 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.; SDWA; Title XIV of the National Defense Authorization Act of 1997, PL 104-201 (Nunn-Lugar II) National Response Plan; Public Health Security and Bioterrorism Emergency and Response Act of 2002; TSCA; Oil Pollution Act; Pollution Prevention Act; RCRA; EPCRA; CWA; FIFRA; Federal Food, Drug and Cosmetic Act; FQPA; Ocean Dumping Act; Public Health Service Act, as amended; 42 U.S.C. 201 et seq.; Executive Order 10831 (1970); Public Law 86-373; PRIA.

Homeland Security: Protection of EPA Personnel and Infrastructure

Program Area: Homeland Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$6,219.1	$6,345.0	$6,248.0	$6,415.0	$167.0
Science & Technology	***$2,023.9***	***$594.0***	***$585.0***	***$594.0***	***$9.0***
Building and Facilities	$10,372.2	$7,870.0	$7,747.0	$8,070.0	$323.0
Hazardous Substance Superfund	$636.7	$594.0	$585.0	$1,194.0	$609.0
Total Budget Authority / Obligations	$19,251.9	$15,403.0	$15,165.0	$16,273.0	$1,108.0
Total Workyears	2.3	3.0	3.0	3.0	0.0

Program Project Description:

This program involves activities to ensure that EPA's physical structures and assets are secure and operational and that certain physical security measures are in place to help safeguard staff in the event of an emergency. These efforts also protect the capability of EPA's vital laboratory infrastructure assets. Specifically, funds within this appropriation support security needs for the National Vehicle and Fuel Emissions Laboratory.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to provide enhanced physical security, including homeland security support activities.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$9.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

Public Health Security and Bioterrorism Emergency and Response Act of 2002; Secure Embassy Construction and Counterterrorism Act (Sections 604 and 629).

Program Area: Indoor Air

Indoor Air: Radon Program
Program Area: Indoor Air
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Indoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$5,201.2	$5,429.0	$5,363.0	$5,488.0	$125.0
Science & Technology	***$434.1***	***$428.0***	***$422.0***	***$441.0***	***$19.0***
Total Budget Authority / Obligations	$5,635.3	$5,857.0	$5,785.0	$5,929.0	$144.0
Total Workyears	37.0	39.9	39.9	39.4	-0.5

Program Project Description:

The Radiation and Indoor Environments National Laboratory (R&IE) in Las Vegas, NV is the only Federal National Institute of Standards and Technology (NIST) radon laboratory. The R&IE radon laboratory supports EPA's radon program by providing exposure services to local, state, and Federal radon programs and to privatized radon proficiency programs. The R&IE radon laboratory also distributes and analyzes radon test kits for community-based environmental justice partners with a focus on tribes.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will target its radon laboratory resources to several key areas: radon exposure services to support local, state, and Federal radon programs; radon laboratory inter-comparisons and device verification exposures to support privatized radon proficiency programs; and test kits and analyses for community-based environmental justice partners. As part of its environmental justice efforts, EPA will distribute 2,000 radon kits to our network of partner organizations and community-based environmental justice partners and analyze 100% of returned radon kits. EPA's radon technical assistance and environmental justice work are relatively low cost and provide a proven benefit to radon professionals and organizations as well as to the underserved community.

The Indoor Air program received a rating of "moderately effective" during a 2005 PART assessment. The Indoor Air program is not regulatory; instead, EPA works toward its goal by conducting research and promoting appropriate risk reduction actions through voluntary education and outreach programs. The Agency will continue to focus on making efficiency improvements and plans to improve transparency by making all aspects of the State Indoor Radon Grant (SIRG) program performance/results data available to the public via our website or other easily accessible means. Please see http://www.epa.gov/radon for further information on indoor air and radon.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Total Cost (public and private) per future premature cancer death prevented through lowered radon exposure.		No Target Established	No Target Established	415,000	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	late 2008	190,000	225,000	265,000	Homes

In FY 2009, EPA's goal is to add 265,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over 2 million. EPA estimates that this cumulative number will prevent approximately 875 future premature cancer deaths (each year these radon reducing features are in place). EPA will track progress against the efficiency measure, in the table above, triennially with the next report date in FY 2009.

Program goals are the result of the total funding the program area receives through EPM, S&T, and SIRG funding.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$9.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$10.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will assist in supporting lab analyses of radon.

Statutory Authority:

CAA Amendments of 1990; IRAA, Section 306; Title IV of the SARA of 1986; TSCA, section 6, Titles II, and Title III (15 U.S.C. 2605 and 2641-2671), and Section 10.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$21,425.6	$21,440.0	$21,632.0	$19,180.0	($2,452.0)
Science & Technology	***$791.2***	***$788.0***	***$777.0***	***$790.0***	***$13.0***
Total Budget Authority / Obligations	$22,216.8	$22,228.0	$22,409.0	$19,970.0	($2,439.0)
Total Workyears	64.7	68.3	68.3	63.8	-4.5

Program Project Description:

The Radiation and Indoor Environments National Laboratory (R&IE) maintains the capacity to conduct field measurements, assessments and technical support for indoor air quality remediations. R&IE also conducts training and provides technical support for development of tribal capacity for indoor air quality programs, such as mold remediation, assessment and characterization of sources of volatiles and intruding vapors, and monitoring and measurement techniques.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will conduct Indoor Air Quality (IAQ) intervention and remediation training courses which will continue to support development of tribal capacity for indoor air quality programs; and, when requested, EPA will conduct field measurements and assessments and provide technical support for indoor air quality remediations. EPA's indoor air quality technical assistance and training work is primarily focused toward tribal communities and meets an identified need at a relatively low cost.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average cost to EPA per student per year in a school that is implementing an Indoor Air Quality plan.		No Target Established	No Target Established	1.40	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Estimated annual	Data	1100	1100	1000	Number

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	Avail 2008				

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of public that is aware of the asthma program's media campaign.	Data Avail 2008	>20	>20	>20	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	Data Avail 2008	2000	2000	2000	Number

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Annual Cost to EPA per person with asthma taking all essential actions to reduce exposure to indoor environmental asthma triggers.		No Target Established	No Target Established	3.90	Dollars

EPA will continue to work towards its long term 2012 goal to have 6.5 million people with asthma take the essential actions to reduce their exposure to their environmental triggers of asthma, including environmental tobacco smoke. EPA's goal is to have close to 400,000 additional people with asthma to take these actions in 2009, bringing the total number to approximately 5.3 million people with asthma taking these actions. As part of this goal, EPA will continue to work to reduce existing disparities between disproportionately impacted populations and the overall population. EPA will also continue to work toward its long term 2012 goal that 40,000 primary and secondary schools (35% of schools) will be implementing effective indoor air quality management programs consistent with EPA guidance.

The Indoor Air program, rated by OMB as "moderately effective" during a 2005 PART assessment will continue to focus on making efficiency improvements in response to

recommendations in the PART assessment. EPA will track progress against the efficiency measures included in the tables above triennially with the next planned report date in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$9.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+4.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CAA Amendments of 1990; Title IV of the SARA of 1986.

Program Area: IT / Data Management / Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Science & Technology	***$4,522.1***	***$3,499.0***	***$3,453.0***	***$3,859.0***	***$406.0***
Leaking Underground Storage Tanks	$136.5	$177.0	$174.0	$162.0	($12.0)
Oil Spill Response	$23.8	$34.0	$33.0	$24.0	($9.0)
Hazardous Substance Superfund	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Total Budget Authority / Obligations	$119,854.2	$111,067.0	$110,496.0	$115,277.0	$4,781.0
Total Workyears	497.4	488.0	488.0	488.0	0.0

Program Project Description:

Agency offices rely on the IT/Data Management program and its capabilities to develop and implement tools for ready access to accurate and timely data. This program houses all of the critical IT infrastructure that allows rapid efficient communication exchange and storage of data, analysis and computations. It also allows access to the scientific, regulatory, and best practice infrastructure needed by agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the Research and Development and Air and Radiation offices to access scientific and program data. Because the IT/Data Management function supports the entire Agency, funds are provided in each operating appropriation including Science & Technology.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal. The program: (1) supports the development, collection, management, and analysis of environmental data (to include both point source and ambient data) to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access; (3) manages the

Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines; and (4) supports Regional information technology infrastructure, administrative and environmental programs, and telecommunications.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Information Technology community will continue to focus on improving the Agency's use of technology, pursuing enterprise solutions and protecting privacy and security of data holdings while improving delivery of information and services to partners and citizens. The Agency's IT/Data Management program forms the core of this effort with its focus on building and implementing the Agency's Integrated Portal, Enterprise Content Management System (ECMS), developing Environmental Indicators, and continuing to deploy enterprise-wide IT infrastructure solutions.

The Environmental Information program's FY 2009 technology efforts have three major components:

- OEI's efforts in the areas of Analytical Capacity and Indicators is expected to help identify data gaps, and suggest areas where additional capacity is needed;
- Through use of the portal and Exchange Network, the Technology Initiative program will increase the integration of quality data, streamline transactions to foster collaboration, reduce the data entry burden, and improve decision making;
- OEI's Readiness to Serve initiative will build the capacity and infrastructure needed to allow more EPA employees to telecommute or work safely and securely in the field.

High quality data and services are integral to the successful achievement of EPA's technology efforts, and the broader IT/Data Management efforts. In FY 2009, EPA's IT/Data Management program will continue to provide methods to manage the quality of its environmental data collection, generation, and use. The primary goal of the EPA Quality System is to ensure that its environmental data are of sufficient quantity and quality to support the data's intended use. As part of the Agency's Quality System, policies and procedures have been developed to assist individual data collectors, data users, and decision makers in defining their needs for data and assessing data against these needs, and to provide EPA management with methods for overseeing the quality-related activities of their programs. Like the larger IT/Data Management efforts, the Quality System is closely coordinated with the Exchange Network and Information Security programs. This relationship ensures quality data are available and accessible to promote sound environmental decision-making.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$59.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$278.0) This increase reflects a restoration of funds that were reduced in this program in FY 2008 for anticipated Agency-wide IT/infrastructure savings pending analysis of final costing. The Agency has completed its analysis and reduced its estimate of the savings associated with changes to IT/infrastructure. Funding changes have been incorporated across the board for FY 2009 IT/infrastructure costs.

- (+$69.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD, and DAA; TSCA; FIFRA; FQPA; SDWA and amendments; FFDCA; EPCRA; RCRA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Science & Technology	***$32,886.2***	***$73,859.0***	***$72,707.0***	***$74,884.0***	***$2,177.0***
Building and Facilities	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Leaking Underground Storage Tanks	$848.5	$901.0	$887.0	$902.0	$15.0
Oil Spill Response	$500.4	$490.0	$488.0	$496.0	$8.0
Hazardous Substance Superfund	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

S&T resources in the Facilities Infrastructure and Operations Program Project are used to fund rent, utilities, and security, and also to manage activities and support services in many centralized administrative areas such as health and safety, environmental compliance, occupational health, medical monitoring, fitness/wellness, and environmental management functions at EPA. Resources for this program also support a full range of ongoing facilities management services including: facilities maintenance and operations, Headquarters security, space planning, shipping and receiving, property management, printing and reproduction, mail management, and transportation services. Because this program supports the entire Agency, funds are included in most appropriations.

FY 2009 Activities and Performance Plan:

For FY 2009, the Agency is requesting a total of $35,521 thousand for rent; $18,547 thousand for utilities; $11,989 thousand for security; $262 thousand for transit subsidy; and $250 thousand for regional moves in the S&T appropriation. The Agency also will continue to manage its lease agreements with General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct. The Agency also reviews space needs on a regular basis.

These resources also help to improve operating efficiency and encourage the use of new, advanced technologies and energy sources. EPA will continue to direct resources towards

acquiring alternative fuel vehicles and more fuel-efficient passenger cars and light trucks to meet the goals set by Executive Order (EO) 13149[3], *Greening the Government through Federal Fleet and Transportation Efficiency* and EO 13123[4], *Greening the Government through Efficient Energy Management*.

Lastly, EPA will provide transit subsidy to eligible applicants as directed by EO 13150[5] *Federal Workforce Transportation.* EPA will continue the implementation of the Safety and Health Management Systems to ensure a safe working environment.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$442.0) Provides additional resources for increases in utility costs.
- (+$984.0) Provides additional resources for increases in security costs.
- (+$60.0) Provides additional resources for increases in transit subsidy costs.
- (+$250.0) Provides additional resources for increases in regional move costs.
- (+$441.0) This change reflects the restoration of the 1.56% rescission to all program projects, it will help fund the projected increase in rent.

Statutory Authority:

FPASA; PBA; Annual Appropriations Act; CWA; CAA; D.C. Recycling Act of 1988; Executive Orders 10577 and 12598; United States Marshals Service, Vulnerability Assessment of Federal Facilities Report; Presidential Decision Directive 63 (Critical Infrastructure Protection).

[3] Information available at http://www.epa.gov/fedsite/eo13149.htm
[4] Information available at http://www.epa.gov/fedsite/eo13123.htm
[5] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html

Program Area: Pesticides Licensing

Pesticides: Protect Human Health from Pesticide Risk
Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$0.0	$62,514.0	$61,819.0	$60,606.0	($1,213.0)
Science & Technology	***$0.0***	***$3,294.0***	***$3,250.0***	***$3,453.0***	***$203.0***
Total Budget Authority / Obligations	$0.0	$65,808.0	$65,069.0	$64,059.0	($1,010.0)
Total Workyears	0.0	488.5	488.5	477.3	-11.2

Program Project Description:

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), section 3(c)(5), states that the Administrator shall register a pesticide if it is determined that, when used in accordance with labeling and common practices the product "will not generally cause unreasonable adverse effects on the environment." Further, FIFRA defines "unreasonable adverse effects on the environment" as "any unreasonable risk to man or the environment."

EPA's Pesticides Program screens new pesticides before they reach the market and ensures that pesticides already in commerce are safe. As directed by FIFRA, the Federal Food, Drug, and Cosmetic Act (FFDCA), and the Food Quality Act of 1996 that amended FIFRA and FFDCA, EPA is responsible for registering and re-evaluating pesticides to protect consumers, pesticide users, workers who may be exposed to pesticides, children, and other sensitive populations. To make regulatory decisions and establish tolerances, the maximum allowable pesticide residues on food and feed, EPA must balance the risks and benefits of using the pesticide, consider cumulative and aggregate risks, and ensure extra protection for children.

Laboratory activity for the Pesticide Program supports the goal of protecting human health through efforts at three laboratories: an analytical chemistry laboratory and a microbiology laboratory at the Environmental Science Center (ESC) at Fort Meade, MD, and an environmental chemistry laboratory (ECL) at Stennis Space Center, Bay St. Louis, MS. These laboratories develop and validate environmental chemistry, analytical chemistry and genetically modified organism (GMO) plant incorporated protectant methods to ensure the United States Department of Agriculture (USDA), the United States Geological Survey (USGS), EPA offices, and states have reliable methods to measure and monitor pesticide residues in food and in the environment. The laboratories, in cooperation with industry, state and other EPA laboratories, develop multi-residue analytical methods to allow enforcement agencies to test for several different chemicals using one test. For additional information, visit http://www.epa.gov/oppbead1/labs/index.htm.

FY 2009 Activities and Performance Plan:

In 2009, the Agency will continue to protect human health by evaluating residue analytical methods for detecting pesticide residues in food and feed, ensuring suitability for monitoring pesticide residues and enforcement of tolerances. This will be accomplished by developing and validating multi-residue pesticide analytical methods for food, feed and water for use by other Federal (USDA Pesticide Data Program and FDA) and state laboratories, and subsequently the program office. Laboratories further support the estimation of human health risks from pesticide use by operating the National Pesticide Standard Repository and by conducting chemistry and efficacy testing for antimicrobials.

EPA's laboratories will continue to provide quality assurance and technical support and training to EPA regional offices, state laboratories, and other Federal agencies that implement the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The laboratories will evaluate registered products that are most crucial to infection control (sterilants, tuberculocides, and hospital-level disinfectants). Under the Plant-Incorporated Protectant (PIP) method validation program, work will continue on evaluating several novel molecular-based methods.

Performance Targets:

Work under this program supports multiple performance objectives. Some of this program's performance measures are program outputs which represent statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, they do provide a means for realizing benefits in that the program's safety review prevents dangerous pesticides from entering the marketplace.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$15.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$188.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$0.0	$41,750.0	$41,214.0	$41,215.0	$1.0
Science & Technology	***$0.0***	***$2,115.0***	***$2,087.0***	***$2,216.0***	***$129.0***
Total Budget Authority / Obligations	$0.0	$43,865.0	$43,301.0	$43,431.0	$130.0
Total Workyears	0.0	320.5	320.5	307.4	-13.1

Program Project Description:

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), section 3(c)(5), states that the Administrator shall register a pesticide if it is determined that, when used in accordance with labeling and common practices the product "will not generally cause unreasonable adverse effects on the environment." Further, FIFRA defines "unreasonable adverse effects on the environment" as "any unreasonable risk to man or the environment."

Along with assessing the risks that pesticides pose to human health, EPA conducts ecological risk assessments to determine potential effects on plants, animals, and ecosystems. EPA works to protect ecosystems, particularly the plants and animals that are not targets of the pesticide, and satisfies additional responsibilities under the Endangered Species Act (ESA).[6] As directed by FIFRA, EPA must determine that a pesticide is not likely to harm the environment, and may impose risk mitigation measures such as restricting uses, denying uses, or requiring monitoring of environmental conditions, such as effects on water sources.[7] In making its regulatory decisions, the Agency considers both the risks and the benefits derived from the use of the pesticide.

Laboratory activities for the Pesticides program support the goal of protecting the environment from pesticide use through three pesticides laboratories: an analytical chemistry laboratory and a microbiology laboratory at the Environmental Science Center (ESC) at Fort Meade, MD, and an environmental chemistry laboratory (ECL) at Stennis Space Center, Bay St. Louis, MS. These laboratories develop and validate environmental and analytical chemistry methods and genetically modified organism (GMO) plant incorporated protectant methods to ensure the United States Department of Agriculture (USDA), the United States Geological Survey (USGS),

[6] The Endangered Species Act of 1973 sections 7(a)1 and 7 (a)2; Federal Agency Actions and Consultations, as amended (16 U.S.C. 1536(a)). Available at U.S. Fish and Wildlife Service, Endangered Species Act of 1973 internet site: http://www.fws.gov/endangered/esa.htm#Lnk07.
[7] Federal Insecticide, Fungicide, and Rodenticide Act, as amended. January 23, 2004. Section 3(a), Requirement of Registration (7U.S.C. 136a). Available online at: www.epa.gov/opp00001/regulating/fifra.pdf.

EPA offices, and states have reliable methods to measure and monitor pesticide residues in food and in the environment. The laboratories, in cooperation with industry, state and other EPA laboratories, develop multi-residue analytical methods to allow enforcement agencies to test for several different chemicals using one test.

FY 2009 Activities and Performance Plan:

In 2009, the Agency will support the protection of the environment by developing methods and conducting analyses to make more informed decisions regarding pesticide exposures and risk to the environment and by operating the National Pesticide Standard Repository to support Federal and state labs involved in enforcement activities. Under the Plant-Incorporated Protectant (PIP) method validation program, work will continue on evaluating several novel molecular-based methods.

The laboratories will also support the protection of the environment by:

1) Evaluating residue analytical methods used for detecting pesticide residues in environmental matrices, such as water, soil and sediment. Evaluating residue analytical methods will give the program confidence in assessing the results generated by the registrant and submitted to the Agency, which is required by the pesticide registration guidelines of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Evaluating residue analytical methods also will assist the Agency in developing and validating multi-residue pesticide analytical methods for environmental matrices for use by other Federal and state laboratories to estimate environmental risks;

2) Responding to urgent pesticide program needs for analytical chemistry support to address specific short-term, rapid turnaround issues of high priority. The labs cooperate with regional activities related to analysis of environmental samples for select pesticides or other environmental contaminants related to pesticide production or disposition and develop exposure data for dioxins, polychlorinated biphenyls (PCBs) and other persistent contaminants of environmental concern, to support Agency environmental risk assessments;

3) Conducting product performance evaluations of antimicrobials to remove inefficacious products and eliminate unnecessary source effluent affecting the environment. The labs also provide data to support use of effective tools for remediation efforts and testing capacity for environmental monitoring of microbial populations (due to overt or unintentional contamination). Another activity involves conducting validation services on methods used to detect DNA and/or proteins for PIPs in major agricultural commodities such as corn, soybeans, potatoes, cotton, etc.

EPA's laboratories provide technical support and quality assurance support to regional, state and other Federal laboratories in numerous ways. The laboratories are responsible for the posting and upkeep of Residue Analytical Methods (RAMs) and Environmental Chemistry Methods (ECMs) for food, feed, soil and water on the EPA web site. These methods are frequently the only resource regional offices, state laboratories and other federal agencies have for current methodology for the newest pesticides. The Microbiology Laboratory has also posted and

maintains the methods used to determine the efficacy of microbiological products on the web where there are approximately 400 methods currently available. (See http://www.epa.gov/oppbead1/methods/. Additionally, ACB and ECB respond to a number of requests (approximately 90 per year) for method information. These requests primarily come from state FIFRA laboratories.

The laboratories are also involved in the development of multi-residue analytical methods (MRMs) – methods that are capable of measuring several similar pesticides simultaneously. These MRMs are made available to state and Federal labs involved in residue monitoring and enforcement activities.

The Analytical Chemistry Branch operates the EPA National Pesticide Standard Repository (NPSR) which provides pesticide reference materials to Federal and state labs for enforcement activities. The NPSR shipped approximately 6,000 analytical reference standards to enforcement laboratories in FY 2007. Based on growth in number of standards requested from FY05 (5000 samples) and FY06 (5800 samples), the NPSR is expected to provide over 6500 standards in FY08 and over 7000 in FY 09.

The labs also participate in AAPCO (American Association of Pest Control Officials) and SFIREG (State FIFRA Issues and Research Evaluation Group) pesticide lab technical meetings with state and industry chemists, responding to issues raised by enforcement laboratories. Additionally, the laboratories are represented on and work through the AOAC (Association of Analytical Chemists) to develop and implement consensus methods for microbiology and chemistry.

In the area of quality assurance, the Agency's labs assist state and Federal partners in several ways. Examples include providing review of Quality Management Plans for Homeland Security laboratory projects conducted under Interagency Agreements (IAGs) with Food and Drug Administration and the Department of Defense, providing technical assistance and oversight on quality assurance and technical questions from FDA and DoD laboratories for a variety of projects; providing quality assurance oversight to the FDA/White Oak facility for the Three Step Method collaborative validation study (the FDA did not have a quality assurance unit in place at the time of the study) and conducting a readiness review at ten collaborating laboratories working on the validation of the Three Step Method. The Three Step Method quantitatively measures the efficacy of antimicrobials for inactivating anthrax spores.

Performance Targets:

Work under this program supports multiple performance measures. Some of the pesticide program's performance measures are program outputs which represent statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment and when used in accordance with the packaging label present a reasonable certainty of no harm.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$107.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$22.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA.

Pesticides: Realize the Value of Pesticide Availability
Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$0.0	$12,114.0	$11,959.0	$12,870.0	$911.0
Science & Technology	***$0.0***	***$472.0***	***$465.0***	***$495.0***	***$30.0***
Total Budget Authority / Obligations	$0.0	$12,586.0	$12,424.0	$13,365.0	$941.0
Total Workyears	0.0	90.4	90.4	93.7	3.3

Program Project Description:

Within the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the definition of "unreasonable adverse effects on the environments" expands upon the concept of protecting against unreasonable risks to man or the environment, by adding "taking into account the economic, social and environmental costs and benefits of the use of any pesticide…" The Realize the Value of Pesticides Program focuses on ensuring that adequate pesticides are available both in emergency situations and through ongoing education and research in environmentally friendlier pest remediation methods. An example of actions that lead to these societal benefits are exemptions granted under FIFRA Section 18. In the event of an emergency, FIFRA Section 18 provides EPA the authority to temporarily exempt certain pesticides uses from registration requirements.

EPA must ensure that such emergency uses will not present an unreasonable risk to human health or the environment. EPA's timely review of emergency exemptions has avoided an estimated $1.5 billion in crop losses per year, resulting from incidents of new pests on crops when exemptions are necessary while progress is made towards full registration. In such cases, EPA's goal is to complete the more detailed and comprehensive risk review conducted for pesticide registration within three years.

The statute clearly recognizes that there will be societal benefits beyond protection of human health and the environment from the pesticide registration process that it establishes. Section 3 of FIFRA also authorizes EPA to register "me-too" products; that is products that are identical or substantially similar to already-registered products. The entry of these new products, also known as "generics," into the market can cause price reductions resulting from new competition and broader access to products. These price declines generate competition that provides benefits to farmers and consumers. For example, an estimated $900 million in termite damage is avoided each year through the availability of effective termiticides. While some effective termiticides have been removed from the market due to safety concerns, EPA continues to work with industry to register safe alternatives that meet or exceed all current safety standards and offer a high level of protection.

Three laboratories support the pesticide program by providing data that are used by EPA to inform regulatory decisions that recognize societal benefits: an analytical chemistry laboratory and a microbiology laboratory at the Environmental Science Center (ESC) at Fort Meade, MD, and an environmental chemistry laboratory (ECL) at Stennis Space Center, Bay St. Louis, MS. These laboratories support program activities by validating environmental and analytical chemistry methods to ensure that the Food and Drug Administration (FDA), the United States Department of Agriculture (USDA), EPA offices, and states have reliable methods to measure and monitor pesticide residues in food and in the environment. Additionally, the laboratories provide support to ensure that certain pesticide products are efficacious. The laboratories, in cooperation with industry, state and other EPA laboratories, develop multi-residue analytical methods to allow enforcement agencies to test for several different chemicals using one test.

FY 2009 Activities and Performance Plan:

In 2009, the Agency will continue to realize the benefits of pesticides by operating the National Pesticide Standard Repository and conducting chemistry and efficacy testing for antimicrobials. EPA's laboratories will continue to provide quality assurance and technical support and training to EPA regions, state laboratories, and other Federal agencies that implement the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The laboratories will evaluate registered products that are most crucial to infection control (sterilants, tuberculocides, and hospital-level disinfectants). Under the plant-incorporated protectants (PIP) method validation program, work will continue on evaluating several novel molecular-based methods.

The laboratories support the program by evaluating residue analytical methods for detecting pesticide residues in food and feed ensuring suitability for monitoring pesticide residues and enforcement of tolerances. The National Pesticide Standard Repository also distributes analytical standards to Federal and state laboratories involved in enforcement activities. The labs develop and validate multi-residue pesticide analytical methods for food, feed and water for use by other Federal (USDA Pesticide Data Program and FDA) and state laboratories. These laboratories generate residue data that is then used by the program office to estimate human health risks. The labs are prepared to respond to urgent program needs for analytical chemistry support and special studies to address specific short-term, rapid turnaround, priority issues.

In addition to residue methods, the labs provide method validation services for genetically modified organism (GMO) products (PIPs). They also develop data to support FIFRA section 18 uses for new chemicals where efficacy data is non-existent (particularly biothreat agents, including *B. anthracis*, or emerging hospital pathogens), as well as evaluate the product performance of antimicrobials used to control infectious pathogens in hospital environments. The labs develop new test methods for novel uses or emerging pathogens, including biothreat agents, in order to provide guidelines for efficacy data for public health claims, guidance for registration, and to provide technical support and training on testing methods and procedures.

Performance Targets:

Work under this program supports multiple performance objectives. Some of this program's performance measures are program outputs which represent statutory requirements to ensure that

pesticides entering the marketplace are safe for human health and the environment and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, they do provide a means for realizing benefits in that the program's safety review prevents dangerous pesticides from entering the marketplace.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+14.0) This reflects an increase for payroll and cost of living for all FTE.

- ($16.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA.

Program Area: Research: Clean Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$0.0***	***$81,054.0***	***$79,993.0***	***$80,588.0***	***$595.0***
Total Budget Authority / Obligations	$0.0	$81,054.0	$79,993.0	$80,588.0	$595.0
Total Workyears	0.0	236.2	236.2	236.4	0.2

Program Project Description:

EPA's Clean Air Research Program provides the scientific foundation for the Agency's actions to protect the air all Americans breathe. The program supports the Agency's implementation of the Clean Air Act (CAA), especially the National Ambient Air Quality Standards (NAAQS),[8] which set limits on how much tropospheric ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead are allowed in the atmosphere.

The program is primarily focused on particulate matter (PM),[9] but includes research on ozone and hazardous air pollutants, also known as air toxics. The program is guided by a series of National Academy of Sciences (NAS) reports[10] and a multi-year plan that outlines research needs and plans to meet those needs, and establishes milestones for evaluating the program's progress.

The scientific findings from EPA's air research inform the development of Integrated Science Assessments, formerly known as Air Quality Criteria Documents, which are periodic reports that synthesize the science relevant to setting the NAAQS. These assessments are prepared by the Human Health Risk Assessment program and used by EPA's Air and Radiation program to develop and propose revisions to the NAAQS. The program also provides the science necessary to support EPA Regional Offices and state regulatory agencies to identify and design effective strategies to meet the standards. The standard setting and implementation research are also informed by integrated research (*i.e.*, across all media—air, water, and land) on the impacts of climate change and mercury in the Research: Global Change and Research: Human Health and Ecosystems programs respectively.

A subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—conducted a peer review of the particulate matter and tropospheric ozone research programs in calendar year 2005.

[8] For more information, see http://www.epa.gov/air/criteria.html.
[9] For more information, see http://www.epa.gov/pmresearch/.
[10] The most recent report is: NRC, *Research Priorities for Airborne Particulate Matter: IV. Continuing Research Progress*. Washington, D.C.: National Academies Press (2004). See http://books.nap.edu/catalog/10957.html.

The subcommittee also conducted a mid-cycle review of the program in September 2007, and noted in their draft report that "…the quality of the science was high, [and] that it was relevant to Agency and user clients. It was felt that the science was also highly informative to the science community itself, and that there was evident progress and Program evolution with the advancement of the respective science fields."[11]

FY 2009 Activities and Performance Plan:

In FY 2008, EPA integrated its air research activities around a multi-pollutant approach. This reorganization was guided by recommendations from the NAS and the BOSC, as well as the emerging research needs of EPA's Air and Radiation program. Also, a revised multi-year research plan has recently been completed. The long-term goals of the integrated program are to improve the Agency's setting of air quality standards, such as the NAAQS; air quality management decisions by parties such as air resource boards and the states, which implement the Clean Air Act; and to improve the understanding of how different sources of air pollution, via atmospheric transportation and transformation, result in human exposure and health effects, such as pulmonary and cardiovascular disease, as well as other noncancer and cancer outcomes. The program will increasingly focus on how to address specific sectors contributing to air pollution in a more holistic manner, with the goal of more effective and efficient strategies.

In FY 2009, EPA's Clean Air Research program will continue to study Americans' exposure to air pollution, and the links between sources of pollution and health outcomes.[12] The program will develop computer models of emissions and the atmosphere, which are used to forecast air quality at local and national scales; predict public exposure to air pollutants; and assist states in developing and validating plans to meet the requirements of the Clean Air Act. The program also will study atmospheric chemistry, such as emission mixtures and the formation of secondary pollutants through in-atmosphere reactions; develop ambient air sampling techniques; and conduct research to correlate ambient measurements of emissions with both their sources and with levels of human exposure.

The program's exposure research will emphasize development of a framework for assessing the effectiveness of air pollution regulations and control strategies. EPA will continue its research to understand air pollution near roads.[13] In collaboration with the Federal Highways Administration (FHWA), the program will focus on topics such as measuring and characterizing emissions near roads; understanding the health effects from those pollutants; and characterizing the effectiveness of low-cost mitigation options.

The integrated program will continue research to inform Agency, state and tribal air quality managers about the sources of air pollution and methods for managing emissions.[14] It will investigate and apply advanced methods to measure the quantity and chemical composition of airborne toxics and particulate matter emissions from human-made and natural sources. These data support development of improved emission inventories, which provide essential data for

[11] The final report will be available at: http://www.epa.gov/osp/bosc/reports.htm
[12] For more information, see http://www.epa.gov/nerl/goals/air/.
[13] For more information, see http://www.epa.gov/nerl/goals/air/linkages.html.
[14] For more information, see http://www.epa.gov/appcdwww/.

trend analysis, Regional, and local scale air quality modeling, regulatory strategies and impact assessments, and human exposure modeling.[15] These methods also support source apportionment, which traces pollutants measured in ambient air to specific sources based on chemical or structural markers in the pollutants that are unique to certain sources. The program also will generate emission samples from various sources for use in exposure and toxicology studies to understand how health effects vary by source, and develop and evaluate the cost and performance of technologies capable of reducing emissions.

EPA will continue collaborate with the Department of Commerce's National Oceanic and Atmospheric Agency (NOAA), to develop advanced air quality models that simulate transport and fate of pollutants in the atmosphere. These models are used by EPA and NOAA, state and local governments, and the general air pollution research and monitoring community to understand and forecast the location, composition and magnitude of air pollutants, and to develop effective emission control policies and regulations. In the BOSC evaluation, the program was commended for the strong relationships it has established with other funding organizations. The research collaboration and coordination supported by the FY 2009 budget request will ensure that the scientific and technical needs of the Air Research Program continue to be met with minimal duplication of effort.

Further, the Agency will continue epidemiological, clinical, and toxicological studies of air pollution's health effects.[16] Research will focus on determining how the toxicity of particles differs by particle size and chemical composition; understanding how emissions from different sources affect health; the degree to which genes, lifestyle, age, and diseases like diabetes and asthma affect susceptibility to air pollution; and understanding the mechanisms inside the human body by which air pollution causes harm. EPA also will investigate air pollution's effects on cardiopulmonary, nervous, reproductive, and immune systems and on development during pregnancy and infancy. The program also will conduct epidemiological studies of communities with single emission sources or industrial sectors to improve understanding of how health endpoints are connected to distinct sources of air pollution. In FY 2009, a priority area for the program's health effects research will be improving scientific understanding of how particle size influences particulate matter–associated health effects.

The program makes extensive use of the Science to Achieve Results (STAR) program's competitive, peer-reviewed grants.[17] In FY 2009, STAR will continue to fund five-year grants to multi-disciplinary particulate matter research centers at five universities.[18] STAR also will continue to fund a ten-year grant (the largest in EPA's history) to the Multi-Ethnic Study of Atherosclerosis–Air Pollution Study,[19] which is examining links between long-term exposure to particulate matter and heart attacks and strokes in 8,700 volunteers in six states, as well as a five-year grant to the Health Effects Institute,[20] a nonprofit research organization cosponsored by EPA and the automotive industry to conduct independent research on the health effects of air

[15] For more information, see http://www.epa.gov/ttn/chief/eiinformation.html.
[16] For more information, see http://www.epa.gov/nheerl/research/cleanair.html.
[17] For more information, see: http://es.epa.gov/ncer/science/pm/.
[18] For more information, see http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/outlinks.centers/centerGroup/19/.
[19] For more information, see http://depts.washington.edu/mesaair/.
[20] For more information, see http://www.healtheffects.org/.

pollution. The program also will fund grants to develop "dynamic" air quality management tools so that local and state air quality managers can adapt emission control plans to changing circumstances in near-real time.

The Office of Management and Budget (OMB) rated the Research: NAAQS program as "adequate" in the program's second Program Assessment Rating Tool (PART) review, which was conducted in calendar year 2005 under the program title "National Ambient Air Quality Standards Research."[21] This rating demonstrates improvement from the program's previous review—conducted in calendar year 2003—in which OMB rated it "results not demonstrated." The improvement in score is attributable primarily to the finalization of two long-term goals toward which the program commits to work: (1) reducing uncertainty in the science that supports standard-setting and air quality management decisions and (2) assessing the links between sources of air pollution and health outcomes. In response to OMB's recommendations following the 2005 review, the program is currently improving integration of its financial and performance data, developing and finalizing methods for measuring progress toward the program's annual and long-term measures, and implementing annual program reviews which will be completed in June 2008. The program also adopted a measure of its efficiency based on an earned value management concept.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of NAAQS program publications rated as highly cited papers	32.9	35.7	No Target Established*	33.9	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health.	UD	No Target Established	50	70	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent planned actions accomplished toward the long-term goal of reducing uncertainty in the science that support standard setting and air quality management	100	100	100	100	Percent

[21] For more information, see http://www.whitehouse.gov/omb/expectmore/summary.10001137.2005.html.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	decisions.					

*No FY 2008 target was established because targets are set every two years.

The research conducted under this program supports EPA Strategic Objective 1.6. Specifically, the program provides sound science to support EPA's goal of clean air by conducting leading-edge research and developing a better understanding and characterization of human health and environmental outcomes.

The program gauges its annual and long-term success by assessing its progress on several key measures. In FY 2009, the program strives to complete 100 percent of its planned actions related to the long-term goal of reducing uncertainty in the science that supports standard setting and air quality management decisions. Additionally, the program plans to complete additional work toward a hierarchy of pollutant sources based on the linkages between source emissions and the concentration of pollutants in ambient air, and the risk they pose to human health. Feedback from the ongoing BOSC review is being used to refine this approach heading into FY 2009.

The program's bibliometric measure, which assesses the quality and impact of its scientific publications compared to other publications in the same field, demonstrates that the programs' publications are "highly cited" 3.3 times more than other publications. In FY 2009, the program aims to further increase its percentage of "highly cited" publications to 33.9 percent. Achieving these ambitious targets will ensure EPA continues to make significant progress toward providing the research needed to meet its long-term clean air goals.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,754.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$116.0 / −0.4 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (-$1,150.0) This reflects a reduction in research that supports air quality standard setting and links sources of emissions to human exposure to air pollutants and their health endpoints. It includes reduced funding for the Science to Achieve Results (STAR) grants program to conduct research on particulate matter (*i.e.*, soot) that would inform EPA's Air and Radiation program, which sets limits on the amount of particulate matter legally allowed in the air. In the context of the larger research program and considering the growing challenges the Agency faces, this reduction would minimize the impact to the highest priority work in the air research program, such as studying emission sources, investigating human exposure to air pollutants, developing methods to manage emissions, and investigating air pollutants health effects.

- (−$125.0 / +0.6 FTE) This reflects the net result of realignments of travel, general expense, and contract resources and shifts of FTE between the air, human health and

ecosystems, land protection and restoration, drinking water, and computational toxicology research programs to align with programmatic priorities.

Statutory Authority:

CAA; ERDDA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$20,449.9***	***$16,908.0***	***$19,688.0***	***$16,365.0***	***($3,323.0)***
Total Budget Authority / Obligations	$20,449.9	$16,908.0	$19,688.0	$16,365.0	($3,323.0)
Total Workyears	39.2	32.6	32.6	32.2	-0.4

Program Project Description:

EPA's Global Change research is assessment-oriented, focused on understanding the effects of global change—particularly climate variability and change—on air quality, water quality, aquatic ecosystems, human health and social well-being in the United States. The Agency strives to produce timely and useful information, decision support tools and adaptation strategies that will enable resource managers, policymakers, and other stakeholders to account for global change when making decisions.

The program is also an active participant in the U.S. Climate Change Science Program (CCSP), the interagency Federal effort to improve scientific understanding of climate change.[22] EPA's program priorities are consistent with those of the CCSP, which coordinates and integrates climate change research among 13 Federal departments and agencies, and CCSP's Strategic Plan,[23] which is being revised. The program also is guided by a multi-year research plan developed by EPA, which is currently under revision.[24]

A subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—conducted a peer review of the program in 2005, and reported that the program "has provided substantial benefits to the nation and that it is on course to make significant further contributions."[25] The subcommittee began a mid-cycle review of the program in January 2008.

[22] For more information, see http://www.climatescience.gov/.
[23] National Science and Technology Council, *Strategic Plan for the U.S. Climate Change Science Program* (Washington: NSTC, 2003). Available at: http://climatescience.gov/Library/stratplan2003/
[24] The program's multi-year plan is currently being revised. The prior plan (2003 version) is available at: http://www.epa.gov/osp/myp/global.pdf.
[25] U.S. EPA, Board of Scientific Counselors, Subcommittee on Global Change Research, *Review of the Office of Research and Development's Global Change Research Program at the U.S. Environmental Protection Agency, Final Report.* Washington, D.C.: EPA (2006), 6. See http://www.epa.gov/osp/bosc/pdf/glob0603rpt.pdf.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will be in the final stages of revising its global change multi-year research plan to focus on three long-term goals: (1) understanding how climate change will affect air quality in the United States, (2) understanding how climate change will affect water quality and aquatic ecosystems, and (3) supporting the statutory mandates of the CCSP to produce periodic assessments of the effects of climate change. A component of the first two goals is to provide support to decision makers with areas of responsibility likely to be affected by climate change, such as air quality district managers, state environmental agencies, watershed managers, and operators of waste and drinking water systems. Two key work products planned under the program's new structure are comprehensive assessments of how climate change will affect U.S. air quality and water quality. These assessments will help EPA's Air and Radiation program and Water program, respectively, understand how climate change will affect their ability to meet statutory, regulatory, and programmatic requirements and account for climate change's effects in their future actions.

The U.S. Global Change Research Act of 1990 mandates periodic scientific assessments of the effects of global change.[26] Section 106 of the act states that these assessments should integrate and interpret the findings of the Federal government's climate change research; analyze the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; analyze current trends in global change; and project major trends for the next 25 to 100 years. From FY 2006 through FY 2008, EPA will participate in the development of CCSP's Synthesis and Assessments Products (SAPs), serving as lead Agency for three of the 21 assessments.[27] Two of the EPA SAPs are among those required to help the CCSP meet the statutory requirements of the 1990 Act. In FY 2009, EPA will continue to participate in CCSP's programmatic, assessment, and planning activities.

The program also will continue decision support efforts by inventorying and assessing the climate-senstitive decisions made by local and state decision makers to identify which decisions are most impacted by climate change and which decisions can benefit most from EPA's scientific findings. A pilot effort in previous fiscal years developed this approach in a specific region of the U.S.(the Chesapeake Bay); in FY 2009, the program will begin to cover the entire country. The results from these assessments will help EPA prioritize its future climate change work.

The program also will develop computer models that simulate how global change may affect U.S. air quality,[28] making progress toward its performance goal to complete a framework linking global change to air quality. The program will model and evaluate potential adaptive responses to climate change, such as changes in energy, pollution control, and transportation technologies, and behavior in various regions and sectors of the U.S.[29] Together, these efforts will help air

[26] See 15 USC §2936.
[27] For more information, see http://www.climatescience.gov/Library/sap/sap-summary.php .
[28] For more information, see http://www.epa.gov/nerl/goals/global/.
[29] For more information, see http://www.epa.gov/appcdwww/apb/greengas.htm.

quality resource managers make informed decisions about how to respond to global change's effects on air quality.

The global change research program makes extensive use of the Science to Achieve Results (STAR) program's competitive, peer-reviewed grants. In FY 2009, STAR's global change component will focus on developing strategies to meet air quality standards that account for future changes in climate and land use, investigating the sensitivity of U.S. water systems to global change, and developing models to quantitatively assess the impacts of global change on water systems.

In FY 2009, the program will shift its environmental and health effects research emphasis to support a comprehensive assessment of how climate change will affect water quality, including aquatic ecosystems. Previous efforts in this area have developed quantitative tools for characterizing the health of coral reefs and studied how changes in water temperature and ultraviolet radiation will affect corals and their symbionts, efforts that led the BOSC to conclude that "the Program is well designed and the researchers have produced important and useful results and products."

The Office of Management and Budget (OMB) rated the Global Change research program as "adequate" in the program's first Program Assessment Rating Tool (PART) review, which was conducted in 2006 under the title "Global Change Research." The rating is attributable primarily to appropriate program purpose and design, strategic planning, program management, and demonstration of some program results. As follow-up actions to the PART, OMB recommended that the program (1) finalize independent, review-informed performance measures; (2) clarify the program's framework and mission; (3) develop a means to measure the program's efficiency; and (4) improve budget–performance integration. In response to these recommendations, the program will begin collecting initial long-term measurement data during its mid-cycle BOSC review in January, 2008, and will collect formal long-term measurement data during its comprehensive BOSC review scheduled for late 2009. Once this baseline information is available, the program will implement new BOSC-informed long-term measures. Additionally, the program is revising its multi-year plan around a clearer framework, and has developed an efficiency measure influenced by earned value management.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent progress toward completion of a framework linking global change to air quality.	75	75	85	95	Percent

The research conducted under this program supports EPA Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, community, and ecosystems, with a focus on global change.

The program gauges its annual and long-term success in meeting this objective by assessing its progress on several key measures. In FY 2009, the program aims to further improve its bibliometric analysis results by (1) increasing the percentage of program publications rated as "highly cited" to 23 percent and (2) increasing the percentage of program publications rated as "high impact" to 24.6 percent. Improvements in these measures demonstrate increased quality and utility of the program's research. In addition, the program plans to meet 100 percent of its planned outputs, and complete additional work toward a framework linking global change to air quality. By meeting these targets, the research program will improve the Agency's ability to make guidance and policy decisions related to global change.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$871.0) This reflects an increase for payroll and cost of living for all FTE.

- (−$3,092.0) This reduction is a result of a Congressionally directed increase included in the FY 2008 Omnibus for support of future rulemaking on greenhouse gases. Funds were provided for research on global climate change research. This schedule is not sustained in the FY 2009 budget request.

- (−$1,102.0 / −0.4 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

USGCRA; NCPA; ERDDA.

Program Area: Research: Clean Water

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$44,342.9***	***$48,548.0***	***$48,775.0***	***$45,283.0***	***($3,492.0)***
Total Budget Authority / Obligations	$44,342.9	$48,548.0	$48,775.0	$45,283.0	($3,492.0)
Total Workyears	202.1	207.2	207.2	190.2	-17.0

Program Project Description:

EPA's Drinking Water Research Program provides sound scientific approaches for ensuring safe and sustainable drinking water through integrated, multidisciplinary applied research. This program provides methodologies, data, tools, models, and technologies in support of health risk assessments and other needs pertaining to regulatory decisions under the Safe Drinking Water Act's (SDWA) statutory requirements. Research also is targeted at implementation of regulatory decisions, addressing simultaneous compliance issues, promoting the sustainability of water resources, the reliable delivery of safe drinking water, and developing approaches to improve water infrastructure. The program is designed around the water cycle and the research is organized around five theme areas (assessment tools, source water protection, treatment strategies, distribution/storage/infrastructure, and exposure/health effects). This structure provides opportunities for integrating method development with health effects research and applications in treatment technologies and water distribution systems.

Research in the Drinking Water Research Program is coordinated with the Agency's regulatory activities and timelines. Current research topics include revisions to the Total Coliform Rule (TCR) and implementation of recent regulatory decisions including the Ground Water Rule, the Stage 2 Disinfection Byproduct Rule (DBP2), and the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2). Research is also targeted at supporting the Underground Injection Control (UIC) regulations that pertain to geologic sequestration of carbon. Another major component of the research program is addressing the information gaps associated with chemicals and microorganisms that are on the Contaminant Candidate List (CCL). Several peer-reviewed research strategies[30,31] and guidance from external experts[32,33,34,35] have provided input and

[30] U.S. EPA, Office of Research and Development. *Research Plan for Microbial Pathogens and Disinfection By-Products in Drinking Water*. EPA 600-R-97-122, Washington, D.C.: U.S. Government Printing Office (1997).
[31] U.S. EPA, Office of Research and Development. *Research Plan for Arsenic in Drinking Water*. EPA 600-R-98-042, Washington, D.C.: U.S. Government Printing Office (1998).
[32] National Research Council. *Classifying Drinking Water Contaminants for Regulatory Consideration.* Washington, D.C.: The National Academies Press (2001).
[33] National Academies of Science. *From Source Water to Drinking Water: Workshop Summary.* Washington, D.C.: The National Academies Press (2004).

guidance for charting the research directions. The Agency also maintains a Drinking Water Research Program (DWRP) Multi-Year Plan[36] (MYP) that outlines steps for meeting these needs and annual performance goals and measures for evaluating progress. The Agency is currently revising the drinking water MYP to reflect anticipated science and regulatory needs in FY 2009 and beyond. These plans are subjected to rigorous peer review[37] and address high priority research questions related to the safety of drinking water and the safety, reliability, and sustainability of drinking water infrastructure.

In 2007, the Drinking Water research program underwent a mid-cycle progress review by the Board of Scientific Counselors (BOSC), a Federal advisory committee comprised of qualified, independent scientists and engineers.[38] The BOSC was "favorably impressed" with the program's revised structure and concluded that the formation of five thematic areas (i.e. Assessment tools, Source water/Water resources, Treatment/Residuals, Distribution/Storage, Water use/Health effects/Health outcomes) "allows focus on statutory requirements such as the 6-year review or the Contaminant Candidate List with the flexibility to address emerging drinking water research issues such as nanotechnology". The Drinking Water research program is adopting specific BOSC recommendations, including identifying opportunities for collaboration and resource leveraging while continuing to plan anticipatory drinking water research.

FY 2009 Activities and Performance Plan:

In FY 2009, the Drinking Water research program will focus on characterizing and managing health risks associated with the sources, production and distribution of drinking water for public water supplies. The research plan reflects a progressive shift from addressing single contaminants towards developing exposure and health effects information that can be applied to classes of contaminants. The thematic areas of the program are: assessment tools, source water protection, treatment strategies, water distribution/storage/infrastructure systems, and exposure/health effects. Anticipated research products include:

Assessment tools: Research is focused on developing tools for the analysis, monitoring, screening and prioritization of drinking water constituents. Research will continue to develop methods to measure CCL chemicals and pathogens to assist in assessing occurrence under Unregulated Contaminant Monitoring Rules and for evaluating the effectiveness of treatment techniques. Exposure biomarkers for use in exposure and epidemiology studies, as well as

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[34] National Research Council. *Indicators for Waterborne Pathogens.* Washington, D.C.: The National Academies Press (2004).
[35] National Research Council. *Public Water Supply Distribution Systems: Assessing and Reducing Risks--First Report.* Washington, D.C.: The National Academies Press (2005).
[36] U.S. EPA, Office of Research and Development, Drinking Water Research Program Multi-Year Plan. Washington, D.C. Available at: http://www.epa.gov/osp/myp.htm.
[37] Science Advisory Board. *Review of EPA's 2003 Draft Drinking Water Research Program Multi-Year Plan* (2005). Available at: http://www.epa.gov/sab/pdf/sab-05-008.pdf.
[38] U.S. EPA, Board of Scientific Counselors. *Mid-Cycle Review Of The Office Of Research And Development's Drinking Water Research Program At The U.S. Environmental Protection Agency.* (Washington: EPA, 2007). Available at: http://www.epa.gov/OSP/bosc/pdf/dwmc082007rpt.pdf

measurement methods (recovery, viability, speciation) will be improved for compliance monitoring and CCL classification and prioritization. Specific projects include:

- Optimization and characterization of an integrated sample collection, concentration, purification and detection for real-time quantitative detection methods for CCL related organisms.
- Evaluation of the virulence factor activity relationships (VFARs) for characterizing CCL pathogens.

Source Water Protection: Protection of surface water and ground water sources of drinking water requires reliable monitoring methods coupled with implementation of best management practices (BMPs). In addition to watershed research, protection of ground water sources will be a focus in FY 2009 with an emphasis on underground injection control (UIC), aquifer storage and recovery (ASR), and ground water recharge. Research will be directed towards answering key questions associated with minimizing risks of geologic sequestration of carbon on underground sources of drinking water (USDW). Projected research products include:

- Report on molecular microarrays for detection of non-pathogenic bacteria and bacterial pathogens in drinking water source waters.
- State-of-the-science report on real-time early warning systems for source water protection.
- Studies on ASR on the safety of drinking water and the impacts of subsurface CO_2 storage on drinking water quality.

Treatment Stategies: The emphasis of the research will be on evaluating existing treatment strategies for control of CCL contaminants, development of point-of-use/point-of-entry systems for small systems, and simultaneous compliance issues. Research products include:

- Synthesis of information on arsenic removal technologies.

- Improved detection method(s) for CCL-related chemicals for use in Unregulated Contaminant Monitoring Regulations.

Distribution/Storage/Infrastructure: Significant efforts will be focused on distribution systems. Studies will be conducted to better understand the growth and colonization of pathogens in distribution systems. The conditions promoting contaminant releases, such as arsenic and lead, from distribution systems and treatment residuals will be characterized. Research started in FY 2007 under the "Water Infrastructure for the 21st Century" Initiative, will continue in 2009 and will include focusing on field investigations and modeling of how distribution system characteristics (age, materials, capacity) and management/operation practices (flushing, pressure, hydrodynamics, storage, mixing of water sources, corrosion control) impact biofilms, water chemistry, corrosion, and drinking water quality. The Agency will explore integrated approaches for managing and assessing risks in the distribution system and the development of innovative, real-time condition assessment, technology, repair or rehabilitation techniques. Research products will report on advanced condition assessment for drinking water mains.

Exposure/Health Effects: A major research focus is clarifying potential health effects of CCL contaminants, waterborne disease outbreak analysis, and epidemiological studies, including the potential exposure and health significance of newly identified regulated disinfection byproducts (DBPs) and mixtures of DBPs, particularly from the use of alternatives to chlorine disinfection. Specific research products include:

- Health effects associated with alternative disinfection processes and their byproducts.
- Epidemiology study on the illness rate for untreated groundwater and distribution systems.

Within the 5 general thematic areas outlined above, the Drinking Water research program will continue to provide support for the SDWA-mandated 6-year review of regulated contaminants (e.g., draft revision of the Total Coliform Rule). Research on health-effects associated with arsenic and DBPs will be winding down. On-going work from the arsenic demonstration program will be synthesized in terms of case study costs and performance results. Results from the comprehensive four-lab study on DBPs will be disseminated. Bench and pilot scale research on simultaneous compliance issues resulting from the Ground Water Rule and the Enhanced Surface Water Treatment Rule will be continued. Modeling and field studies will be initiated to address UIC research needs associated with geologic sequestration of carbon.

By conducting research in support of SDWA, this research program will assist the Agency in pursuing its strategic objective of providing, by 2011, drinking water that meets all applicable health-based drinking water standards to 91 percent of the population served by community water systems.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2005 Program Assessment and Rating Tool (PART) review, which was conducted under the program title "Drinking Water Research."[39] In response to OMB recommendations following the 2005 PART, the program is currently 1) working to set targets for the remainder of its long-term and annual measures, and 2) improving its oversight of partners. To those ends, the program collected initial long-term measurement data resulting from its mid-cycle BOSC review in May 2007, and will collect formal long-term measurement data during its comprehensive BOSC review scheduled for fall 2009. These baseline data points will allow the program to set future targets.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of Six Year Review decisions.	100	100	100	100	Percent

[39] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004371.2005.html.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of Contaminate Candidate List Decisions.	100	100	100	100	Percent

The research conducted under this program supports EPA Strategic Objective 2.3 – Enhance Science and Research. Specifically, the program conducts leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in drinking water.

The program gauges its annual and long-term success by assessing its progress on several key measures. In 2009, the program will strive to complete 100% of its planned outputs in support of its long-term goals. In achieving these targets, the program will contribute to EPA's goal of protecting human health through the reduction of human exposure to contaminants in drinking water.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$691.0 / -0.3 FTE) This change reflects the net of restoring of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (-$300.0 / -3.6 FTE) This reflects completion of a portion of arsenic methods research under the 2001 Arsenic Rule.

- (-$560.0) This decrease is the net effect of increases for payroll and cost of living for all FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-$941.0 / -13.1 FTE) Resources are being redirected to support research for the development of provisional advisory levels within Homeland Security, work to support contaminated sites and asbestos in the Land Protection and Restoration program, and the advancement of water quality criteria for recreational waters and emerging water contaminants in the Water Quality program. Within drinking water, health effects research on disinfection byproduct mixtures is approaching completion and publication.

- (-$1,000.0) This reflects a Congressionally directed increase included in the FY 2008 Omnibus appropriation for carbon sequestration research. Research on the human health effects and environmental impacts of carbon storage and sequestration will continue through STAR grants in FY 2009.

Statutory Authority:

SDWA; CWA; ERDDA; MPRSA.

Research: Water Quality
Program Area: Research: Clean Water
Goal: Clean and Safe Water
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$54,428.5***	***$56,454.0***	***$55,573.0***	***$56,179.0***	***$606.0***
Total Budget Authority / Obligations	$54,428.5	$56,454.0	$55,573.0	$56,179.0	$606.0
Total Workyears	249.4	239.4	239.4	236.8	-2.6

Program Project Description:

The Water Quality research program is designed to support the Clean Water Act (CWA), providing scientific information and tools to the Agency and others to help protect and restore the designated uses of water bodies that sustain human health and aquatic life. The program conducts research on the development and application of water quality criteria; the implementation of effective watershed management approaches; and the application of technological options to restore and protect water bodies using information on effective treatment and management alternatives.

The Water Quality research program is responsive to the needs of EPA's Water program and Regional Offices, which are the program's primary clients in developing research priorities. The Agency maintains a Water Quality Research Program Multi-Year Plan[40] (MYP) that outlines steps and provides a timeline for meeting these needs along with related annual performance goals and measures for evaluating progress. EPA's Board of Scientific Counselors (BOSC), a Federal advisory committee comprised of qualified, independent scientists and engineers, reviewed the Water Quality research program in January 2006. The BOSC review found "the Water Quality research program appropriately addresses EPA's Strategic Goal 2 of Clean Water by creating the tools necessary for the Office of Water (OW) to establish water quality criteria and respond when those criteria are not being met, this includes using research results to comply with regulations and advance fundamental understanding. The program is responsive to EPA's Office of Water, which the program has correctly identified as its primary client, in developing their research priorities."[41]

FY 2009 Activities and Performance Plan:

[40] U.S. EPA, Office of Research and Development, *Water Quality Research Program Multi-Year Plan.* Washington, D.C.: EPA. Available at: http://www.epa.gov/osp/myp.htm.
[2] U.S. EPA, Board of Scientific Counselors, *Review of the Office of Research and Development's Water Quality Research Program at the U.S. Environmental Protection Agency* (Washington: EPA, 2006). Available at: http://www.epa.gov/osp/bosc/pdf/wq0605rpt.pdf

Research efforts within the water quality research program are aligned with the Agency's strategic objectives[42] under the CWA to:

- promulgate protective standards,
- identify contaminant contributions to impaired waters,
- use tools to restore and protect the nation's waters with due consideration to point and non-point sources of contamination, and
- maintain the nation's aging infrastructure.

In FY 2009, the Water Quality research program will support priorities set in consultation with EPA's Water program and Regional offices, taking into account such factors as pollutant/stressor type, water body types, and source of pollutants (e.g. agricultural versus urban). Research activities are categorized within three areas: 1) Water Quality Integrity Research; 2) Watershed Management Research; and, 3) Source Control and Management Research. Although the quality of the nation's waters has shown improvement, threats to water quality remain, and new threats continue to be identified.

Water Quality Integrity research priorities support regulatory driven needs related to revising aquatic life guidelines, recreational water criteria, and developing criteria for emerging contaminants (i.e. invasive species), nutrients, toxics, sediments, and multiple stressor effects on stream biota, including research on biological condition gradients for Tiered Aquatic Life Uses (TALU). Specific stressors include habitat alteration, nutrients, pathogens, and emerging contaminants. EPA's water program is the major client for research products developed under this research and will use them in the development and application of water quality criteria.

Research on diagnostic methods will enable EPA to continue its focus on the causes and sources of aquatic system impairment. Specifically, this research will provide the scientific foundation and information management scheme for an integrated process for assessing, listing, and reporting water quality conditions that meet or fail to meet statutory requirements, including a classification framework for surface waters, watersheds, and regions. As EPA directs and informs the efforts of the States to adopt nutrient criteria for individual water bodies, research is required to identify nutrient responses based on geographic region, water body type, and designated use. Research will continue toward linking stressor-response relationships to a biological condition gradient and TALU framework, while providing information on technical guidance for the development of nutrient water quality criteria for coastal wetlands and estuaries and Great Lakes.

The Water Quality program supports the adoption and implementation of watershed management approaches by States and Tribes as they require strong standards, monitoring, Total Maximum Daily Load (TMDL) determinations, and implementation programs, including best-management practices, restoration, and TMDL watershed plans. Watershed Management Research supports TMDL allocation processes with the development of information and integrated water quality and quantity modeling and monitoring tools. This research supports assessing condition, diagnosis of impairment, mitigation, and achieving success, including support for CWA Section

[42] U.S. EPA, Office of the Chief Financial Officer, 2006-2011 EPA Strategic Plan, Washington, D.C.:EPA. Available at www.epa.gov/ocfo/plan/plan.html

305(b) reporting, use attainability analyses identifying designated uses, and TMDL adaptive management. Research efforts in this area include Gulf of Mexico Hypoxia research aimed at developing risk-based forecasting capability to aid water resource managers in making scientifically defensible nutrient management decisions to reduce the hypoxia problem, restore the natural habitats, and restore food web assemblages along the Gulf coast. Other research addresses identifying the locations and connectivity of headwater streams and wetlands (complimentary research on how and what role headwater streams and isolated wetlands play in reducing pollutant loads, and their effect on downstream quality is being conducted under the Ecological Research program to enhance our understanding of the benefits and value of ecological services); implementation support for suspended and bedded sediments frameworks; and technical assistance for watershed modeling and decision support tools. Key users of these products will be at the regional, state, and local level.

In addition, existing models of pollutant transport and fate will be expanded to allow the evaluation of alternative strategies for restoring and/or protecting local and state watersheds. Particular emphasis will be placed on strategies for nutrient control in rural/agrarian settings and on strategies for pollutant control in urban settings. Approaches will be studied for effectively monitoring the reduction in the water column pollutants and improvements in aquatic systems and for demonstrating the effectiveness of protecting designated uses from future development or other impacts.

The President's initiative to preserve and restore wetlands will be supported with research on how wetland processes assimilate nutrient contaminants. The water quality research that defines wetland performance is fundamental to the implementation of water quality trading programs. It will include a comparison of natural and constructed wetlands to determine how seasonal changes in hydrologic regime, stressor load, and upland land use affect the functioning of these systems and will inform the protection and restoration of wetlands. Economic assessments of the use of wetlands in water quality trading also will be conducted.

Research on the best management of manure is needed to ensure that environmentally responsible practices are available, and will continue in support of EPA's Wastewater Management program. Field studies of CAFOs will determine the magnitude of releases to ground waters and surface waters and evaluate control options with emphasis on nutrient and pathogen contaminants. This work will support the development of effective TMDLs and National Pollutant Discharge Elimination System (NPDES) permits.

Source control and management research priorities will develop information and tools to characterize, control, and manage point and non-point sources of water quality impairment. Research addresses aging infrastructure, green infrastructure, wet weather flows and residuals management. Major users of these products will be the Agency, states, regional authorities and municipalities.

Research will be conducted to assess and improve the control of microbial releases from POTWs during periods of significant wet weather events. During these events wastewater flow may exceed POTW treatment capacity, resulting in diversion of wastewater around secondary treatment units followed by recombination (i.e.,"blending") with flows from the secondary

treatment units or discharging it directly into waterways from the treatment plant. ORD will evaluate findings of studies of the fate of pathogen indicators in three POTWs and conduct in-house research to understand the fate of pathogens and pathogen indicators and the effectiveness of destroying pathogens in blended effluents. This will help determine the extent of human health and environmental effects caused by wet weather events. Current POTW practices for handling significant wet weather events, such as blending, will be assessed to identify best practices during such events. In out years, this work will lead to reports that POTW managers can use to more cost-effectively operate their systems in wet weather conditions while still protecting water quality.

Research on the performance of non-point source best management practices (BMPs) will be conducted in order to provide information to watershed managers and others for the more cost-effective reduction of pollutant loading to surface waters. Particular emphasis will be placed on green infrastructure and on the variation of BMP cost and performance with geographical and other major influencing variables.

In FY 2009, research will continue the development of innovative solutions to manage the nation's aging wastewater infrastructure. Research started in FY 2007 under the "Water Infrastructure for the 21st Century" initiative will continue to develop the science and engineering to improve and evaluate promising innovative technologies and techniques to increase the effectiveness and reduce the cost of operation, maintenance, and replacement of aging and failing wastewater conveyance systems. Research efforts will demonstrate technologies and approaches for new and innovative condition assessment, rehabilitation, and design of wastewater collection systems and comprehensive asset management. This research will support EPA in developing policy and revolving funds allocation decisions to address this multi-billion dollar problem faced by the Nation, and will support utilities and other stakeholders involved in meeting community watershed management goals and in the cost-effective assessment, rehabilitation and management of their systems.

EPA will continue to support the Pathogens Equivalency Committee. This effort evaluates innovative approaches to sewage sludge treatment for the purposes of determining whether they meet requirement of Part 503 (biosolids) regulations.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2006 (PART) review, which was conducted under the program title "Water Quality Research."[43] This "adequate" rating was supported by findings that the program had long-term and annual output performance measures in place that reflected the purpose of the program, as well as a preliminary output efficiency measure. In response to OMB recommendations following the 2006 PART, the program has established a process by which the BOSC will assign a progress rating to each program long-term goal as part of its reviews. These ratings will provide the data for new program long-term outcome measures that will be instated. Using these baseline ratings, the program will be able to set appropriate future year targets. Additionally, to address OMB's recommendation that the program establish an outcome-oriented efficiency measure, EPA has initiated a National Academy of Sciences (NAS) study to determine the most appropriate approach.

[43] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Peer-reviewed publications over FTE.				.82	Publications

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs (in support of WQRP long-term goal #1) delivered	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs (in support of WQRP long-term goal #2) delivered	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs (in support of WQRP long-term goal #3) delivered	100	100	100	100	Percent

The research conducted under this program supports EPA Strategic Objective 2.3- Enhance Science and Research. Specifically, the program conducts leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in fish and shellfish, and recreational waters, and to support the protection of aquatic ecosystems.

In 2009, the program plans to accomplish its goals of completing and delivering 100% of its planned outputs. In achieving these targets, the program will contribute to EPA's goal of supporting the protection of human health through the reduction of human exposure to contaminants in fish, shellfish, and recreational waters, and to support the protection of aquatic resources. Additionally, the program strives to improve its number of publications per FTE to .82. In achieving these targets, the program will better enable EPA to meet its goals.

FY 2009 Change from FY 2008 Enacted (Dollars in Thousands):

- (+$1,042.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (-$436.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-2.6 FTE) This decrease reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

CWA; ODBA; SPA; CVA; WRDA; WWWQA; MPPRCA; NISA; CZARA; CWPPRA; ESA; NAWCA; FIFRA; TSCA; ERDDA.

Program Area: Research: Human Health And Ecosystems

Human Health Risk Assessment
Program Area: Research: Human Health and Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$35,018.0***	***$38,856.0***	***$38,334.0***	***$39,323.0***	***$989.0***
Hazardous Substance Superfund	$3,926.4	$3,972.0	$3,910.0	$3,325.0	($585.0)
Total Budget Authority / Obligations	$38,944.4	$42,828.0	$42,244.0	$42,648.0	$404.0
Total Workyears	176.3	182.1	182.1	178.6	-3.5

Program Project Description:

Human health risk assessment is a process where information is analyzed to determine if an environmental hazard might cause harm to exposed persons (National Research Council, 1983). Health assessments generated by EPA's Research and Development program are used extensively by EPA Program and Regional offices, and other parties to determine the potential risk to public health from exposure to environmental contaminants, to develop regulatory standards, and to manage environmental cleanups.

Three complementary areas comprise the health assessment program:

1) The Integrated Risk Information System and other priority health assessments,
2) Risk assessment guidance, methods, and model development, and
3) Integrated Science Assessments of criteria air pollutants.

Integrated Risk Information System (IRIS) and other health hazard assessments: Peer reviewed, qualitative and quantitative health hazard assessments are prepared on environmental pollutants of major relevance to EPA's regulatory mandates. These assessments are used by EPA's Program and Regional Offices to support their decision-making, and they are also disseminated to the public, principally on the IRIS internet database.[44] IRIS is widely used throughout EPA and the risk assessment/risk management community as the premier source of hazard and dose-response information for environmental pollutants. At the end of 2007, more than 540 health hazard assessments were available through IRIS.

Risk assessment guidance, methods and model development: Improved risk assessment guidance, methods, and models are developed to enhance the quality and objectivity of assessments through the incorporation of contemporary scientific advances for use in decision-making by EPA's Program and Regional Offices. These scientific products are

[44] Available at: http://www.epa.gov/iris.

externally peer reviewed and disseminated through the published literature, EPA web sites, and incorporation in IRIS assessments.

Integrated Science Assessments: Congress requires that EPA regularly summarize the state-of-the-science on the criteria air pollutants – ozone, particulate matter, sulfur and nitrous oxides, carbon monoxide, and lead – to assist EPA's air and radiation programs in determining the National Ambient Air Quality Standards (NAAQS). These Integrated Science Assessments (formerly Air Quality Criteria Documents) are major risk assessments that undergo rigorous external peer review by the Clean Air Scientific Advisory Committee (CASAC).

This research program is guided by the Human Health Risk Assessment Multi-Year Plan[45] (MYP), which provides detail on the assessment and methods development products planned under this program. The MYP also outlines research needs and priorities for making decisions central to EPA's implementation of its statutory responsibilities and to its mission to protect human health and the environment. Performance outputs and outcomes are documented in the MYP through the annual performance goals and measures structure. The MYP also coordinates with a number of EPA research strategies and plans[46] (*e.g.,* Human Health Research Strategy, Drinking Water MYP, Clean Air MYP) to obtain the information necessary to inform risk assessment outputs and programmatic decision-making needs.

In FY 2003, a Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—subcommittee review found that the National Center for Environmental Assessment (NCEA) has made several key advancements including completion of a strategic plan, targeting cutting-edge risk assessments, enhancing communication, and improving capabilities to provide environmental assessment resources in response to significant events. A subsequent BOSC subcommittee program review began in November 2007. This prospective and retrospective review is evaluating the program's relevance, quality, performance, and scientific leadership. The BOSC's evaluation and recommendations will provide guidance to EPA to help plan, implement, and strengthen the program over the next five years.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to support IRIS and other health hazard assessments by:

- Completing several health hazard assessments of high priority chemicals for interagency review or external peer review and posting several finalized assessments on the internet; and
- Consulting with the National Academy of Sciences (NAS) on critical risk assessment methods development and assessment approaches.

[45] Available at: http://www.epa.gov/osp/bosc/pdf/hhramypdraft.pdf.
[46] Available at: http://www.epa.gov/ord/htm/researchstrategies.htm#rs01.

In the area of risk assessment guidance, methods and models, the Agency will support improvements in the following areas:

- Approaches for applying mode of action information in risk assessments;
- Approaches for characterizing risks to susceptible populations;
- Approaches for characterizing environmental exposures for use in risk assessments;
- Approaches to quantification (e.g., PBPK and BBDR modeling, categorical regression, meta analysis approaches);
- Variability and uncertainty analysis (e.g., Bayesian and other approaches);
- Approaches for applying cumulative risk assessment principles to health assessments (e.g., whole mixture and component based approaches)

In FY 2009, the Agency will support the NAAQS process:

- Developing and implementing a process to identify, compile, characterize, and prioritize new scientific studies for "Integrated Science Assessments" of criteria air pollutants, as a mandated prerequisite to EPA's review of the NAAQS and to effectively meet court ordered deadlines to provide these assessments; and
- Delivering final Ecological Integrated Science Assessments for Particulate Matter, for the NOx/SOx secondary standards, and for Carbon Monoxide (draft) to contribute to EPA's Air and Radiation program's review of the NAAQS and creation of state-of-the-science methods for continuous evaluation of assessments of new scientific information on criteria air pollutants.

These continued investments will allow the human health risk assessment (HHRA) program to make significant progress toward its long-term goals, providing state-of-the-science health hazard assessment information. The work supports risk assessment models, methods, and guidance to inform decisions and actions to protect human health from risks posed by environmental pollutants.

The Office of Management and Budget (OMB) rated the HHRA program as "moderately effective" in a 2006 Program Assessment Rating Tool (PART) review, which was conducted under the program title "Human Health Risk Assessment."[47] This "moderately effective" rating was attributed to the fact that the program had long-term, annual, and efficiency measures in place and that the program exhibited strong financial management and budget-performance integration. In response to OMB recommendations following the 2006 PART, the program is currently 1) expanding its efficiency measures, 2) developing and implementing revisions to the IRIS review process, 3) investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments, and 4) instituting regular independent program reviews. The program has taken action on each of these recommendations. For example, for a BOSC review that began in November 2007, it developed a BOSC charge including questions to evaluate HHRA's effectiveness and relevance to key risk management decisions. The program also is examining how best to expand its efficiency measure to ensure consistency with other approaches being developed across EPA's Research and Development

[47] For more information, see http://www.whitehouse.gov/omb/expectmore/detail/10004308.2006.html

program. In 2008, the program will improve the IRIS prioritization process. Accordingly, the program will revise its performance measure and targets to more appropriately capture relative priorities of assessments.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average cost to produce Air Quality Criteria/Science Assessment documents.	5,533	5,386	3,796	4,235	Average Cost in Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents.	100	90	90	90	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of HHRA health assessments*.	100	90	90	90	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Usefulness of HHRA's Air Quality Criteria Documents (AQCDs), represented by the number of days between the completion of AQCD peer review and publication of the EPA staff document that relies on AQCD	68	106	90	90	Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of HHRA	100	90	90	90	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	Technical Support Documents.					

*Currently, the 2009 planned outputs include delivering 16 health hazard assessments to interagency or external peer review.

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people and communities.

The program gauges its annual and long-term success in meeting this objective by assessing its progress on several key measures. In 2009, the program plans to meet at least 90% of its planned outputs in support of 1) Integrated Science Assessment summaries (formerly Air Quality Criteria Documents), 2) HHRA Health Assessments (completing health hazard assessments of high priority chemicals for interagency review or external peer review and posting finalized assessments on the internet), and 3) HHRA Technical Support Documents.

The program is re-examining its productivity and efficiency measures in response to expected feedback from its recent BOSC review and the National Academy of Sciences study of the best approaches for measuring the efficiency of research.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$58.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$270.0 / -3.7 FTE) This reflects a reduction in funding for lower priority research on risk assessment methods, such as research supporting the revision of inhalation reference concentration (RfC) methodologies.

- (+$1,201.0 / +0.2 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. These funds also will be used in support of risk assessment research.

Statutory Authority:

CAA; SDWA; CWA; TSCA; FIFRA; CERCLA; SARA; FQPA; ERDDA.

Research: Computational Toxicology
Program Area: Research: Human Health and Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$12,159.5***	***$15,103.0***	***$12,135.0***	***$14,863.0***	***$2,728.0***
Total Budget Authority / Obligations	$12,159.5	$15,103.0	$12,135.0	$14,863.0	$2,728.0
Total Workyears	35.7	34.3	34.3	32.7	-1.6

Program Project Description:

Computational Toxicology is the application of mathematical and computer models to assess the risk chemicals pose to human health and the environment. Computational biology offers the possibility that, with advances in computational biology's sub-disciplines (e.g., genomics, proteomics, and metabonomics), scientists may have the ability to develop a more detailed understanding of the risks posed by a much larger number of chemicals while reducing the use of animals during toxicological testing.

EPA's Computational Toxicology Research Program (CTRP) has three long term goals: 1) improving the linkages in the source-outcome paradigm; 2) providing tools for screening and prioritization of chemicals under regulatory review; and 3) enhancing quantitative risk assessment. The National Center for Computational Toxicology (NCCT) was specifically created to play a critical coordination and implementation role in these activities across the Agency. The strategic directions of CTRP are highly consistent with the report recently released by the National Research Council entitles "Toxicity Testing in the Twenty-first Century: A Vision and a Strategy" (NRC, 2007).

The Agency has developed a peer-reviewed *Framework for a Computational Toxicology Research Program*,[48] which identifies the research needs and unique capabilities of EPA and provides the basis for a more focused and integrated research program in the future. This research effort also supports *Understanding Complex Biological Systems*, one of the Administration's FY 2008 R&D priorities.

A subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers— has been established to provide guidance to the newly formed NCCT. In April 2005, this subcommittee met to review the proposed directions for the NCCT. Their report is available on the BOSC web site at http://www.epa.gov/osp/bosc/subcomm-ctox.htm. The report praised the early efforts of the NCCT and encouraged its further development. A formal response was prepared and submitted

48 U.S. EPA, Office of Research and Development. *A Framework for a Computational Toxicology Research Program. Washington, DC: EPA.* Accessed August 4, 2005. Available at: http://www.epa.gov/comptox/publications/comptoxframework06_02_04.pdf.

to EPA and the BOSC. The BOSC expressed strong support for the program's 2006-2008 Implementation Plan and ongoing research of the CTRP in their 2006 review (see http://www.epa.gov/comptox/bosc_review/2006/index.html). A recent review of the program by the BOSC held in December 2007 focused specifically on the topics of information management, high throughput screening, dose response models for arsenic, and the virtual liver programs. Preliminary comments at the review suggested strong support for this seminal work.

FY 2009 Activities and Performance Plan:

Consistent with the research *Framework* and program implementation plans, the CTRP will focus in three key areas in FY 2009: 1) information technology; 2) chemical prioritization and categorization tools; and 3) systems biology models. Greater emphasis will be placed on using systems biology based approaches to advance health-based assessments.

Information Technology: New technologies are needed to mine existing data for patterns to appropriately place new chemicals of unknown hazard in the context of existing data. In addition, new technologies will allow the integration of data from different domains of toxicology and newer "omics" data. In FY 2009, the Distributed Structure-Searchable Toxicity Database project (DSSTox) will begin expanding involvement of data generation efforts with the 1) ToxCast program, a chemical prioritization project being developed by NCCT; 2) the National Toxicology Program, an interagency program within the Department of Health and Human Services, whose mission is to evaluate agents of public health concern by developing and applying tools of modern toxicology and molecular biology; and 3) high-throughput screening techniques, a system to rapidly and efficiently test large batches of chemicals for bioactivity utilizing robotics and automation applied to molecular biology and assay methods. Efforts also will include collaboration with European counterparts. The DSSTox project will be an important structure-annotated and structure-searchable summary toxicity data conduit to other toxicology systems in this program. In addition, a data management system, Aggregated Computational Toxicology Resource (ACToR), is being developed to handle the needs of the CTRP program, including ToxCast, DSSTox, and virtual liver. This system will consist of several databases and computer applications for data access and analysis. In FY 2009 and beyond, the ACToR system will begin to integrate other types of quantitative biological and toxicological data on chemicals.

Chemical Prioritization and Categorization Tools: Having the capability to predict which chemicals are in greatest need of toxicology testing and which endpoints would be the most important to examine is a pressing problem for multiple regulatory offices in EPA. Knowledge of the key steps in a chemical's potential mechanisms of action provides a template for developing models for these predictions.

The ToxCast^{TM} program is a multi-component effort launched in FY 2007. As a result of this research the Agency is obtaining high-throughput screening data on 320 chemicals of known toxicological profiles. More than 400 endpoints are being generated on each chemical through nine research contracts and one Interagency Agreement (with the National Institutes of Health (NIH) Molecular Libraries Initiative at the National Chemical Genomics Center). Fingerprints of biological activity associated with differing toxicological profiles will be developed from this database. The ToxCast approach is highly consistent with the recent recommendations of the National Research Council for a transformation in toxicology involving modern biological tools.

In FY 2008, ToxCast™ linkages will be expanded as the US has the lead role in OECD's Molecular Screening Initiative that will bring a number of international partners into the research program. In FY 2008 and beyond, plans are to begin Phase II of ToxCast™ that will profile the activities of up to 1000 chemicals in order to broaden the chemical diversity used in Phase 1 and to evaluate the predictive nature of bioactivity signatures developed in that phase. With successful completion of Phase II, ToxCast™ technologies can be applied to chemicals of concern to EPA program offices.

The Agency also will conduct research focusing on molecular modeling to predict and understand chemical toxicity. In FY 2009, the focus will shift towards the consideration of other interaction targets in biological macromolecules such as binding sites in receptors and enzymes that play a role in reactive processes.

Systems Biology Models: Modeling now plays a crucial role in practically all areas of biological research. Systems models integrate information at all levels of organization and aid in bridging the source-to-outcome gap and in conducting quantitative risk assessments. In FY 2009, this research will:

- Provide standards for developing, documenting, archiving, and accessing quantitative mathematical models that will foster both the development and linkages of these models and their regulatory acceptance;
- Utilize systems-modeling approaches for the latest biological, chemical, and exposure data for quantitative risk assessment;
- Develop guidance on best practices for the construction, analysis and reporting of toxicological models that link pharmacokinetic information with the dynamic responses of target organs; and
- Coordinate experimental studies with biologically based dose-response models to understand the low dose effects of arsenic on key biological systems (collaborative effort with the National Health and Environmental Effects Research Laboratory).
- Implement the Virtual Liver Project that will provide (1) a framework that coherently integrates mechanistic information and data to elucidate perturbations induced by chemicals (2) inference tools for extrapolating mechanisms across life stages, species and susceptible populations; and (3) quantitative tools for predicting the risk of adverse outcomes in humans through dynamic simulation (collaborative effort with the National Health and Environmental Effects Research Laboratory).

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions with a focus on human, community, and ecosystem health.

Performance Targets:

Work under this program supports EPA Strategic Objective 4.4: Enhance Science and Research. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions with a focus on

human, community, and ecosystem health. Currently, there are no performance measures for this specific program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,776.0) This increase supports computational toxicology research. The resources provide the minimum funding necessary to deliver timely, critical research results for the Agency, developing more efficient methods to evaluate chemical toxicity. Such research includes Phase II of ToxCast™,[49] which upon successful completion can be applied to chemicals (as an innovative alternative to evaluating chemicals) of concern to EPA program offices. Another important result of this research will be reducing the reliance on the use of animals for toxicity testing.

- (+$356.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$404.0 / -1.6 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

TSCA; FIFRA; FQPA; SDWA; ERDA.

[49] ToxCast is an international recognized pioneering research program using tools developed in the pharmaceutical industry for drug discovery to detect the critical biological targets of chemicals at cost orders of magnitude less than traditional toxicity testing approaches. ToxCast is central to our collaborative efforts with the National Toxicology Program of NIEHS and the NIH Chemical Genomics Center of the National Human Genome Research Institute (NHGRI)

Research: Endocrine Disruptor

Program Area: Research: Human Health and Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$10,476.7***	***$10,131.0***	***$10,317.0***	***$9,502.0***	***($815.0)***
Total Budget Authority / Obligations	$10,476.7	$10,131.0	$10,317.0	$9,502.0	($815.0)
Total Workyears	53.4	54.4	54.4	50.1	-4.3

Program Project Description:

Research in direct support of EPA's endocrine screening and testing programs (mandated under the Food Quality Protection Act (FQPA) of 1996 and the Safe Drinking Water Act Amendments[50] (SDWAA) of 1996) evaluates current testing protocols and develops new protocols to evaluate potential endocrine effects of environmental agents. Other research develops and applies methods, models, and measures to evaluate real-world exposures to endocrine disruptors and characterize related effects resulting from these exposures for humans and wildlife; and develops risk management tools to prevent or mitigate exposures. Research assists decision makers in working toward reducing and preventing exposure of humans and ecosystems to endocrine disruptors.

Research is guided by the Research Plan for Endocrine Disruptors, which was developed with participation from major clients and outlines research needs and priorities.[51] The Agency also maintains a multi-year plan (MYP)[52] for Endocrine Disruptors that outlines steps for meeting these needs, as well as annual performance goals and key research outputs for evaluating progress.

In December 2004, the Endocrine Disruptors research program was reviewed by a subcommittee of EPA's research advisory committee, the Board of Scientific Counselors (BOSC), which commended the progress and direction of the research and provided recommendations for further partnerships.[53] Consistent with BOSC recommendations, EPA will take a leadership role in the application of "omics" technologies (e.g., genomics, proteomics, and metabonomics studies), focusing research on understanding mechanisms of action and extrapolation across species by applying "omics" approaches. In the first mid-cycle review, which began in August 2007, the

[50] SDWA Section 1457.
[51] U.S. EPA, Office of Research and Development, *Research Plan for Endocrine Disruptors.* Washington, D.C.: EPA (1998). Available at: http://www.epa.gov/ord/htm/documents/ORD-EDR-Feb1998.pdf.
[52] U.S. EPA, Office of Research and Development, *Multi-Year Plan for Endocrine Disruptors.* Washington, D.C.: EPA (2003). Available at: http://www.epa.gov/osp/myp/edc.pdf.
[53] U.S. EPA, Office of Research and Development, EDC Research Program Review. Washington, D.C. (2004). Available at: http://www.epa.gov/osp/bosc/pdf/edc0504rpt.pdf; updated draft 2007 available at: http://www.epa.gov/osp/bosc/subcomm-edcs_mid.htm#documents.

subcommittee described the updated draft MYP as "excellent" and indicated that the Program's progress exceeded its expectations.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to develop, evaluate, and apply innovative DNA microarray and other state-of-the-art analytical methods for endocrine disrupting chemicals (EDCs). EPA's Endocrine Disruptors research program has developed and refined assays and improved other screening tools using genomics and high-speed computing capabilities so that the Agency has the necessary protocols to validate for use in the Endocrine Disruptors Screening Program. Using genomics and related approaches in the continued development of improved molecular and computational tools that can help prioritize chemicals for screening and testing will lead to a reduction of animal testing and is within the "Understanding Complex Biological Systems" category highlighted as a priority for Federal investment by the Office of Management and Budget (OMB) and Office of Science and Technology Policy (OSTP)[54]. This research is also consistent with the newly released NAS report on "Toxicity Testing in the Twenty-first Century: A Vision and a Strategy" which recommended that the Agency move toward using new technologies to prioritize and screen for chemicals.[55] Other important areas of research to be continued in FY 2009 include:

- Developing/improving *in vivo* and *in vitro* assays to provide the Agency the methods it needs to implement the Congressionally mandated Endocrine Disruptor Screening Program – a high priority for the Agency;
- Developing the next generation of assays by applying newer computational and molecular approaches to develop models that predict a chemical's ability to cause endocrine disruption;
- Determining classes of chemicals that act as endocrine disruptors and their potencies; characterizing modes of action and the shape of the dose-response curve; developing approaches for assessing cumulative risk; and extrapolating results across species which would lead to reduced animal testing;
- Developing molecular indicators of exposure and analytical methods for detecting certain EDCs; identifying the key factors that influence human exposures to EDCs; and identifying sources of EDCs entering the environment, focusing on: wastewater treatment plants, concentrated animal feeding operations (CAFOs), and drinking water treatment plants; developing tools for risk reduction and mitigation strategies; and
- Applying methods, models, and tools developed by EPA and other research organizations to characterize the impact of environmental mixtures of EDCs on environmental media and aquatic organisms. Sources of EDCs to be examined include wastewater treatment plants, CAFOs, and drinking water plants.

The program's long-term performance measures are: (1) to determine the extent of the impact of endocrine disruptors on humans, wildlife, and the environment to better inform the Federal and scientific communities; and (2) to reduce the uncertainty regarding the effects, exposure,

[54] FY 2008 Administration Research and Development Budget Priorities memo by J.Marburger and S. McMillin; August 16, 2007.
[55] National Academies Press (2007). Available at: http://www.nap.edu/catalog.php?record_id=11970#toc.

assessment, and management of endocrine disruptors so that EPA has a sound scientific foundation for environmental decision-making. The research program also has developed performance indicators that monitor research activities and outputs. Targets for these include screening and testing protocols that the Prevention, Pesticides and Toxic Substances program will validate for use in evaluating the potential for chemicals to cause endocrine-mediated effects. To improve performance, the programs are currently working to develop baseline data for efficiency measures that compare dollars and labor hours for validating chemical assays.

OMB rated the research program as "adequate" in its 2004 Program Assessment Rating Tool (PART) review, which was conducted jointly with the Prevention, Pesticides and Toxic Substances program under the title "Endocrine Disruptors."[56] This rating was supported by findings that the program was free of major design flaws, had a clear purpose, and was reasonably well-managed. In response to OMB recommendations following the PART, the program has articulated its R&D priorities to ensure compelling, merit-based justifications for funding allocations. Additionally, the Prevention, Pesticides and Toxic Substances program has compiled baseline data for its efficiency measure and continues to collect data to serve as a comparison to its baseline.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Improved protocols for screening and testing	3	6	2	0	Reports

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Effects and exposure milestones met	5	4	5	9	Reports

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Assessment milestones met	0	0	0	0	Reports

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Risk management milestones met	2	3	1	1	Reports

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, community, and ecosystems, with a focus on endocrine-active pesticides and toxic chemicals.
As a result of the 2004 PART process, the program has developed long-term performance measures. In addition, the research program has developed annual performance indicators that

[56] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10002280.2004.html

monitor the completion of its key research outputs. These products will ultimately be delivered to the Prevention, Pesticides and Toxic Substances program for evaluating the potential of chemicals to cause endocrine-mediated effects.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$350.0) This reduces additional Congressionally directed funds included in the FY 2008 Omnibus appropriation for research on EDCs.

- (-$204.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-$253.0 / -4.3 FTE) The development of validated tiers I and II endocrine disruptor screening protocols will be completed at the end of FY 2008, as announced in the Federal Register in July 2007. In FY 2009, these FTE will be redirected to support high priority investigations of the health effects of asbestos under the Land Protection and Restoration program. This also includes a realignment of resources that provide organization-wide support.

- (-$8.0) This change reflects the 1.56% rescission to all program projects in addition to technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CAA; ERDDA; FIFRA; TSCA; FQPA; SDWA; CWA; RCRA; CERCLA; PPA.

Research: Fellowships
Program Area: Research: Human Health and Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$12,231.1***	***$8,438.0***	***$9,845.0***	***$8,887.0***	***($958.0)***
Total Budget Authority / Obligations	$12,231.1	$8,438.0	$9,845.0	$8,887.0	($958.0)
Total Workyears	4.5	2.7	2.7	2.6	-0.1

Program Project Description:

To help ensure an educated and trained scientific workforce for the future, EPA offers five programs that encourage promising students to obtain advanced degrees and pursue careers in environmentally related fields. The programs are:

Science to Achieve Results (STAR) Fellowship Program:[57] EPA provides stipends, tuition assistance, and research support to graduate students in environmentally related fields for up to three years. In addition to conducting quality environmental research, fellows agree to maintain contact with the Agency for at least five years after graduation.

Greater Research Opportunities (GRO) Fellowship Program:[58] EPA provides stipends, tuition assistance, and research support to undergraduate and graduate students in environmentally related fields for up to two (undergraduate) or three (graduate) years. The GRO program serves higher education institutions that receive less than $35 million annually in Federal science and engineering funds. In addition to conducting quality environmental research, fellows agree to maintain contact with EPA for at least five years after graduation.

Environmental Science and Technology Policy Fellowship Program:[59] In conjunction with the American Association for the Advancement of Science, EPA hosts scientific and technical professionals who have completed a Ph.D. or equivalent degree for up to two years at EPA's Headquarters. Recipients work independently with support from Agency mentors on self-designed projects that enable them to work at the interface of science and public policy.

Environmental Public Health Fellowship Program:[60] In conjunction with the Association of Schools of Public Health, EPA hosts individuals who have attained master's degrees from accredited U.S. schools of public health for up to two years. Recipients work on self-designed projects that involve environmental public health.

[57] For more information, see http://es.epa.gov/ncer/fellow.
[58] For more information, see http://es.epa.gov/ncer/fellow.
[59] For more information, see http://fellowships.aaas.org/01_About/01_Partners.shtml#EPA.
[60] For more information, see http://www.asph.org/document.cfm?page=751&JobProg_ID=1.

EPA Marshall Scholarship Program:[61] In conjunction with the British Marshall Scholarships, EPA offers scholarships for U.S. students for environmentally related graduate study. The program gives priority to students whose work is global or international in nature. Funded by the British government, scholars spend two years at a British university. EPA may support eligible scholars for up to three additional years as they work toward a doctoral degree in either the United Kingdom or U.S.

A subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—conducted a review of the STAR and GRO fellowship programs in March, 2006. The subcommittee reported that "the fellows funded by the STAR and GRO programs have made excellent contributions in environmental science and engineering, and a number of them continue to be employed in the environmental field … the EPA programs clearly are of value to the Agency and the nation in helping to educate the next generation of environmental scientists and engineers."[62]

FY 2009 Activities and Performance Plan:

EPA will review and award new STAR and GRO fellowships and support fellows who received awards in earlier fiscal years. Fellowship recipients will complete progress and exit reports, and the Agency will maintain contact information and follow-up data on former fellows. The program also will select and arrange hosting for AAAS and ASPH recipients and support a portion of eligible Marshall Scholarship recipients.

Performance Targets:

Work under this program supports EPA's Objective 5.4: Enhance Science and Research. Currently, there are no PART performance measures for this specific program project, as the program has not been subject to PART review. However, the program collects follow-up data on former fellows, and is working to develop appropriate metrics for future years.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$538.0) EPA is redirecting a portion of the Greater Research Opportunities (GRO) grants program's budget in the Human Health and Ecosystems research program to the GRO fellowships program. This realignment will allow the GRO program to better meet the Agency's goals.

- (+$77.0 / -0.1 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

[61] For more information, see http://www.marshallscholarship.org/applicationepa.html.
[62] EPA, Board of Scientific Counselors, *Review of the Office of Research and Development's Science To Achieve Results (STAR) and Greater Research Opportunities (GRO) Fellowship Programs at the U.S. Environmental Protection Agency*. Washington, D.C.: EPA (2006), 1–2. See http://epa.gov/osp/bosc/pdf/star0609rpt.pdf.

- (−$1,562.0) This reduction is a result of a Congressionally directed increase included in the FY 2008 Omnibus for Science to Achieve Results (STAR) fellowships.

- (−$11.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

Statutory Authority:

CAA; CWA; FIFRA; NCA; RCRA; SDWA; TSCA; ERDDA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$167,910.0***	***$145,046.0***	***$153,032.0***	***$144,742.0***	***($8,290.0)***
Total Budget Authority / Obligations	$167,910.0	$145,046.0	$153,032.0	$144,742.0	($8,290.0)
Total Workyears	520.3	497.0	497.0	478.3	-18.7

Program Project Description:

The Agency conducts human health and ecosystems research to: 1) identify and characterize environment-related human health problems and determine exposures to and sources of agents responsible for these health concerns; and 2) identify the impacts of human activities on ecosystem services, measure the relationship between human well-being and ecosystem services, and provide tools for policy makers and managers to protect and restore ecosystem services through informed decision making at multiple spatial and temporal scales. The Human Health and Ecological Research Program also supports mercury research, advanced monitoring research, nanotechnology research, exploratory research, and the Agency's Report on the Environment (ROE).

Both the human health and ecosystems research programs are continually evolving. The Human Health research program is working to maintain its success in "reducing uncertainties in risk assessment" while orienting the program toward "developing and linking indicators of risk" along the source-exposure-effects-disease continuum that can be used to demonstrate reductions in human risk. This strategic shift is designed to include research that addresses limitations, gaps, and challenges articulated in the 2003 and 2007 Reports on the Environment. The Ecological research program is transitioning from a focus on monitoring ecosystem conditions to a focus on understanding and protecting ecosystem services, which represents a natural progression that builds upon existing work that seeks to inform decision-making processes.

Research is guided by the "Human Health Research Strategy"[63] and the "Ecological Research Strategy,"[64] which were developed in collaboration with major clients (*e.g.*, EPA's Program and Regional Offices). These strategies outline the program's research needs and priorities. Under this program, several multi-year plans (MYPs)[65] (*e.g.*, human health, ecological research, and mercury) convey research priorities and approaches for achieving goals and objectives. MYPs

[63] U.S. EPA, Office of Research and Development. *Human Health Research Strategy*. Washington, DC: EPA. Available at: http://www.epa.gov/nheerl/humanhealth/HHRS_final_web.pdf.
[64] For more information, see http://www.epa.gov/ord/htm/documents/eco.pdf.
[65] For more information, see http://www.epa.gov/osp/myp.

outline the steps for meeting client research needs, as well as annual performance goals and key research outputs for evaluating progress.

The Human Health research program and the Ecological research program both underwent successful reviews by EPA's research advisory committee, the Board of Scientific Counselors (BOSC) in March of 2005. The BOSC stated, "The research of the human health research program is of high quality and appropriately focused, it is multidisciplinary, yet coherent and coordinated, and the research benefits from managerial excellence across all aspects of the program."[66] The BOSC also commented that these planned actions and initiatives provide "great potential for significant impacts in the future." In 2007, mid-cycle reviews of each program resulted in a rating of "Meets Expectations" for work completed to date.[67]

The BOSC review of the Ecological research program found that the program's "strategy still recognizes the importance of continuing ORD's support to ensure that appropriate environmental and ecological data are collected in monitoring programs, especially use of sampling and analysis approaches that can be corroborated by ORD research" and that "the evolving emphasis on ecosystems services and value is appropriately laid out and justified."[68]

FY 2009 Activities and Performance Plan:

Human Health Research

In FY 2009, EPA is proposing a program designed to identify indicators of risk (effects, susceptibility, and exposure indicators) that can be used to demonstrate reductions in human health risks (i.e., evaluate effectiveness of risk management or regulatory decisions). Of the total $75 million requested in FY 2009 for Human Health research, $57 million is requested for research in this area. This research will focus on the development of sensitive and predictive methods to identify viable bioindicators of exposure, susceptibility, and effect that could be used to evaluate public health impacts at various geospatial and temporal scales. Research also will focus on developing biologically based models to predict biological effects based on internal dose.

EPA will continue to support research on mode of action information that can be used to reduce reliance on default assumptions in chemical risk assessments, particularly as related to selection of appropriate dose-response models for risk assessment and protection of vulnerable populations. Such research will inform the re-evaluation of acceptable levels of arsenic and its metabolites in drinking water, as well as the risk assessments of cancer and non-cancer effects of conazoles and structurally related fungicides. Additional research efforts will develop emerging molecular methods and systems biological approaches to identify critical toxicity pathways, *e.g.*,

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[66] *Report of the Subcommittee on Health*, revised July 27, 2005, Board of Scientific Counselors, pg 9. For more information, see http://www.epa.gov/osp/bosc/pdf/hh0507rpt.pdf.

[67] U.S. EPA, Board of Scientific Counselors. *Mid-Cycle Review of the Office of Research and Development's Human Health Research at the U.S. Environmental Protection Agency.* (Washington: EPA, 2007). Available at: http://epa.gov/osp/bosc/pdf/hhmc072307rpt.pdf.

[68] U.S. EPA, Board of Scientific Counselors, *Mid-Cycle Review of the Office of Research and Development's Ecological Research at the U.S. Environmental Protection Agency.* (Washington: EPA, 2007). Available at: http://www.epa.gov/OSP/bosc/pdf/ecomc082307rpt.pdf

oxidative stress, neuroendocrine disruption, for characterizing the effects of chemicals (such as particulate matter, metals, pesticides, and chemical contaminants in drinking water) on human health.

Research will develop tools for identifying communities (*e.g.*, localities, populations, groups) at greatest risk, identifying and quantifying the factors influencing these exposures, and developing and implementing appropriate risk reduction strategies. Research on intervention and prevention strategies will ultimately reduce human risk associated with exposures to single and multiple environmental stressors. Cumulative risk research will develop approaches for restructuring exposures from biomarker data generated in large-scale exposure and epidemiological studies and linking these exposures to their primary sources, and for using exposure, biomarker, and pharmacokinetic data in cumulative risk assessments. For example, in 2007, EPA's Human Health research program discovered a biomarker that can predict the severity of an asthmatic response in susceptible people, resulting in new protocols for improving indoor air quality and providing the scientific basis for public education policies and risk management strategies involving exposure to molds.

Other human health research will continue to focus on exposures to environmental contaminants and subsequent effects during critical life-stages, such as early development, childhood, or aging. Efforts related to children's health include identification of the key factors influencing children's exposures to environmental toxicants (including chemical exposure in schools) and the production of high quality children's exposure data to reduce current uncertainties in risk assessment. Human health research focused on physiological and biochemical changes during critical life-stages will be used as a basis for understanding susceptibility and the role of environmental stressors in the exacerbation or pathogenesis of disease.

EPA also will continue to support and collaborate with the EPA-sponsored Centers for Children's Environmental Health and Disease Prevention Research (FY 2009 Request, $6 million), which study whether and how environmental factors play a role in children's health. This continued interaction is supported by the BOSC, which encourages synergistic research progress. These unique Children's Centers perform targeted research in children's environmental health and translate their scientific findings into intervention and prevention strategies by working with communities. The Children's Centers have established long-term birth and school age cohorts that follow participants over many years to consider the full range of health effects resulting from exposure to environmental chemicals. Additionally, the Children's Centers are tracking a wide range of environmental exposures at multiple stages of development to evaluate relationships between these exposures and observed health effects.

In FY 2009, research on public health outcomes will continue to assess the cumulative impact of a suite of air pollution reduction programs on environmental public health indicators for children and older populations. Research to determine the effectiveness of regulatory decisions on human health following exposure to waterborne pathogens will continue. EPA also will move toward integrating valid and predictive bioindicators of exposure, susceptibility and effects to develop approaches to assess public health impacts of regulatory decisions, including developing environmental health outcome indicators through the Agency's Science to Achieve Results (STAR) program.

The Office of Management and Budget (OMB) rated the program as "adequate" in a 2005 Program Assessment Rating Tool (PART) review, which was conducted under the program title "Human Health Research."[69] This rating was attributed to findings that the program had a focused design, meaningful performance measures, and that the program's research results were being used to reduce uncertainty in risk assessment. In response to OMB recommendations after the 2005 PART, the program has implemented all follow-up recommendations resulting from its 2005 BOSC review; has established preliminary targets for its long-term measures based on BOSC mid-cycle review feedback; and has worked to improve its budget and performance integration.

Ecological Research

In FY 2009, the total level of funding requested for Ecosystems research is $70 million. The Ecological Research Program (ERP) is a multi-media program consistent with the integrated perspectives of the Agency's Healthy Communities and Ecosystems goal (FY 2009 Request, $66 million). The program's ultimate goal is that decision-makers routinely apply information and methods developed by this program to make proactive policy and management decisions that ensure human well-being by conserving and enhancing ecosystem services over time and at multiple scales. Four areas will comprise the research program: (1) defining ecosystem services and their implications for human well-being and valuation; (2) measuring, monitoring, and mapping ecosystem services at multiple scales over time; (3) developing predictive models for quantifying and forecasting the changes in ecosystem services under alternative management scenarios; and (4) developing and adapting a decision support platform for decision makers to use to protect and restore ecosystem services through informed decision making at multiple spatial and temporal scales. These research areas will be carried out through three different types of studies: (a) the study of the impact of a nationally important pollutant (reactive nitrogen—for example, in support of the new NOx/SOx NAAQS) on ecosystem services; (b) the study of ecosystem services in important ecosystems (wetlands and coral reefs) for which the Agency has responsibilities; and (c) the study of real places facing the trade-off among ecosystems while conserving services provided.

In FY 2009, the emphasis on the Environmental Monitoring and Assessment Program (EMAP) will continue to decrease as the methods for national aquatic surveys are transferred to states and tribes with EPA oversight. Continuing technical support for implementing the surveys will transfer to the Water Quality Research program in Goal 2. These transfers are natural progressions, from core research to applications in other program research and use by the Program Offices. However, a continuing challenge is upgrading of EMAP to using real-time, sensor based technology for the most critical chemical and biological measurements.

The EMAP design significantly reduces the cost of monitoring for large scale studies by taking a random sample of sites at a carefully chosen point in time. The ecological research program will begin examining monitoring design and implementation options focused on field sensors that would be used to decrease the need for field visits through the placement of field proven remote sensors. By doing so, not only will the cost of field sampling be reduced, but the frequency of measurements for selected sites can be greatly increased at no additional cost. These more

[69] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html.

frequent measures would be helpful in better understanding the response of ecosystems to seasonal and annual changes, particularly to improve model predictions of change. The combination of the more efficient EMAP site selection process and the remotely sensed real-time data would make EMAP a more cost effective ecological monitoring system.

The new emphasis of the ERP will be to advance a more comprehensive theory and practice for quantifying ecosystems services, their values, and their relationships to human well being. The goal is consistent incorporation into environmental decision making at local, regional and national scales.

Over the next few years, this focus will become the primary direction of the ecological research program. Ecosystem services, e.g., the ability of vegetation to retain water and nutrients, to provide habitat for animals, to decrease run-off to streams, rivers and lakes, to sequester carbon, and to provide food and shelter are often considered free and infinite. However, misuse of these services leads to degradation or destruction and they are costly to replace when gone. A well-known current example is the decrease in honey bee populations and thus their free service provided to farmers nationally for pollination of crops have to be replaced by some means- at additional costs ultimately passed on to the consumer. The same can be said for the high costs of replacing the natural water retention provided by healthy ecosystems that has to be replaced by costly storm sewers that are currently overloaded in many communities. Another example is the elimination of wetlands that protect coastal areas from storm surge.

The ERP research is supporting the *EPA Ecological Benefits Assessment Strategic Plan* and Executive Order 12866 which deal with assessing costs and benefits of alternative strategies for environmental protection. The research is expected to be the first integrated program to address the difficult topic of maintaining, enhancing, and restoring the services provided by the natural environment. As a result, the ERP will provide the scientific basis for including more comprehensive valuations of ecosystem services than currently possible into management strategies by clarifying the economic, social and ecological ramifications of various management options. The work is broadly applicable across the Agency as the regulatory programs prepare cost and benefit analyses of their decisions on alternative regulatory strategies. Because the program must incorporate social and economic sciences, opportunities to collaborate with non-traditional partners within and outside of EPA will facilitate a unique, more cross-disciplinary, more broadly applicable research program. In collaboration with Agency partners within the Water program, the Air and Radiation program, the Policy, Economics, and Innovation program, and EPA Regions and offices, the Ecological Research program has identified four immediate uses for information on ecosystem services:

- Provide technical support for agency policies, including voluntary measures such as environmental stewardship;
- Provide improved techniques for estimating the benefits and costs related to national rule-making;
- Develop metrics on ecosystem services (e.g., for use in the Report on the Environment or for creating environmental Gross Domestic Product accounts); and
- Create credible scientific foundations for market incentives (e.g., for ecosystem services trading or for investments in conservation).

Every day, local town, county, and state managers make decisions to support economic growth. The information provided by the program will enable the manager/community to better decide where, for example, development should best occur to maintain or improve storm water flow, increase recreational opportunities by the location of functional wetlands, protect local water resources, and at the same time, decrease the cost to the community for these services they will want or require. The desired outcome of the research is for decision makers to be able to better understand the ways in which their choices affect the type, quality and magnitude of the services we receive from ecosystems such as clean air and water, productive soils and food, when local, regional, or national decisions need to be made.

Diagnostics and forecasting research in the current program will be shifting to development and understanding of models describing (quantifying changes) and forecasting the response of ecosystem services to human actions and natural stressors at multiple scales over time. It is the decision support tools for policy makers and managers that will ultimately facilitate the protection and restoration of ecosystems. These tools (e.g., models, maps, animations, and other data rich displays) will be created for explicit and proactive examination of a range of management options at multiple spatial and temporal scales. Environmental managers will use these tools to identify and prioritize the most effective approaches and methods for conserving, enhancing or restoring important ecosystem services, so that their actions are as cost-effective as can be achieved. Field-based research will be conducted on approaches and methods to conserve, enhance or restore important ecosystem services, in particular, water and nutrient regulation, soil retention, biomass production, and water supplies in riparian zones and wetlands.

The Program will provide guidance and tools for balancing the protection and use of ecological resources. Tools and models will, therefore, be created in a context relevant to economic, socio-cultural, and human health needs. The collection of activities and products will transform the way we understand and respond to environmental change by shaping future policy and management decisions, based on a much improved understanding of the ecosystem services we often take for granted.

The Ecological Research program received a "moderately effective" rating in its most recent OMB PART review in 2007. While the program received a "results not demonstrated" rating in 2003, and an "ineffective" rating in 2005, the program has made extensive progress and continues to improve by: 1) developing and publishing a revised multi-year research plan that clearly demonstrates how the program's research supports the EPA mission, avoids duplication with other research programs, and ensures the strategic vision of the program is current and outcome-oriented; 2) increasing budget, program and performance information transparency in budget documents; and 3) educating the Agency on program utility and performance in relationship to environmental outcomes to enhance independent science reviews.

Exploratory Grants and Nanotechnology Research

EPA is increasingly focused on nanotechnology's implications for environmental health and safety. The Agency's efforts are coordinated with other Federal agencies through the National Nanotechnology Initiative (NNI)[70]. EPA's nanotechnology research (FY 2009 Request, $14.9

[70] For more information, see http://www.nano.gov/.

million, including $2.7 million in the Land research program, $11.8 million in the Human Health and Ecosystem research program, and $0.2 million in both the Air and Sustainability research programs) also is guided by a nanotechnology white paper[71] prepared by the Agency and an environmental, health, and safety research needs document[72] prepared by the Nanotechnology Environmental and Health Implications Working Group of the National Science and Technology Council's Subcommittee on Nanoscale Science, Engineering and Technology.

In FY 2009, the Agency's Science to Achieve Results (STAR) program will continue to fund exploratory grants on the implications of manufactured nanomaterials on the environment and human health, in collaboration with other Federal agencies.[73] The Agency also will continue in-house nanotechnology research initiated in FY 2007. The integrated programs will focus on assessing the potential ecological and human health exposures and effects from nanomaterials likely to be released into the environment; studying the lifecycles of nanomaterials to better understand how environmental releases may occur; developing methods to detect releases of nanomaterials; and using nanotechnology to detect, control, remediate, or prevent traditional pollutants. Nanotechnology research also is supported in the Research: Land Protection and Restoration program and, to a lesser extent, other programs.

Report on the Environment and Advanced Monitoring Initiative

The Report on the Environment (ROE) plays a critical role in EPA's strategic planning activities as the Agency develops and implements more transparent and outcome-oriented measures and indicators. In FY 2009, EPA will continue mission-based research that will help support this triennial report.

FY 2009 research in the Advanced Monitoring Initiative (AMI) will link various EPA offices/regions and other research programs to improve Agency decision-making and analyze program performance of FY 2006-2008 AMI investments (FY 2009 Request, $5 million). The initiative also will continue to connect information technology advancements with advances in remote sensing and *in-situ* monitoring to improve the interface between research products and environmental and health decision-making. EPA and its partners will continue to integrate socioeconomic, human health, and ecosystem databases and models, to monitor the health of humans and the environment over greater expanses, in less time, and more cost-effectively than ever before, supporting decision-making processes that provide clear societal benefits in the near term. In addition to improving collaborative capabilities focused on decision-making, EPA will continue building a knowledge base of the accumulated AMI learning experience. This effort is linked with the interagency U.S. Global Earth Observations (USGEO) initiative and with the international community through the Global Earth Observation System of Systems (GEOSS) 10-Year Implementation Plan. Each year since 2003, the annual OMB/Office of Science and

[71] Environmental Protection Agency, *Nanotechnology White Paper (Washington: EPA, 2006).* Available at: http://www.epa.gov/osa/nanotech.htm.
[72] National Science and Technology Council, *Environmental, Health, and Safety Research Needs for Engineered Nanoscale Materials (Washington: NSTC, 2006).* Available at: http://www.nano.gov/NNI_EHS_research_needs.pdf
[73] For more information, see http://es.epa.gov/ncer/nano/.

Technology Policy (OSTP) Memorandum on Research and Development Budget Priorities[74] has encouraged agency efforts to align with USGEO and GEOSS.

Mercury Research

EPA has developed a multi-year plan for studying mercury (FY 2009 Request, $4 million), including its sources, control and treatment, environmental fate and behavior, impacts on ecological resources, and potential effects on human health.[75] In FY 2009, the program will continue to support the Agency's recent Clean Air Mercury Rule (CAMR),[76] including research to determine whether mercury "hot spots" exist. EPA also will study the aquatic fate and transport of mercury in order to better understand the relationship between emissions and mercury concentrations in fish tissue, an important pathway to human exposure.

In collaboration with the Department of Energy and others, research will focus on emissions monitors to determine the amount and characteristics of mercury emitted by sources such as coal-fired utilities. The program also will develop and evaluate emissions control technologies, with an emphasis on technologies that can simultaneously control mercury and other air pollutants, and investigate whether mercury removed from coal-fired power plant emissions remains stably trapped in combustion and scrubber residues.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average time (in days) to process research grant proposals from RFA closure to submittal to EPA's GAD, while maintaining a credible and efficient competitive merit review system	254	307	292	277	Average Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental	100	100	100	100	Percent

[74] OMB/OSTP FY 2008 Administration Research and Development Budget Priorities Memorandum for the Heads of Executive Departments and Agencies, June 2006.
[75] EPA, Office of Research and Development, *Mercury Research Multi-Year Plan* (Washington: EPA, 2003). See http://www.epa.gov/osp/myp/mercury.pdf.
[76] For more information, see http://www.epa.gov/air/mercuryrule/.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	forecasting tools and methods to forecast the ecological impacts of various actions.					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of Ecological Research publications rated as highly-cited publications.	21.10	20.4	No Target Established	21.4	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of Ecological research publications in "high-impact" journals.	20.80	20.3	No Target Established	21.3	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of State, tribe, and EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for causal diagnosis tools and methods to determine causes of ecological degradation.	67	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of public health outcomes long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of peer-reviewed EPA risk assessments in which ORD's characterization of aggregate/cumulative risk is cited as supporting a decision to move away from or to apply default risk assessment assumptions.	This is a long-term measure, no data was collect in FY 2007	This is a long-term measure, no targets for FY 2007	This is a long-term measure, no targets for FY 2008	5.5	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of mechanistic data long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of peer-reviewed EPA risk assessments in which ORD's mechanistic information is cited as supporting a decision to move away from or to apply default risk assessment assumptions.	This is a long-term measure, no data was collect in FY 2007	This is a long-term measure, no targets for FY 2007	This is a long-term measure, no targets for FY 2008	16.5	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of peer-reviewed EPA RAs where ORD methods,	This is a long-term measure,	This is a long-term measure,	This is a long-term measure,	3.5	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	models or data for assessing risk to susceptible subpopulations is cited as supporting a decision to move away from or apply default risk assessment assumptions	no data was collect in FY 2007	no targets for FY 2007	no targets for FY 2008		

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of aggregate and cumulative risk long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent variance from planned cost and schedule.	Data Lag	-11.6	-9.6	-7.6	Percent

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions with a focus on human, community, and ecosystem health.

The programs gauge their annual and long-term success by assessing progress on several key measures. In 2009, the Human Health research program plans to accomplish its goals of completing and delivering 100% of its planned outputs. The program is also targeting increases in the percentage of its peer reviewed risk assessments in which ORD's research is cited as supporting a decision to move away from or to apply default risk assessment assumptions, as was encouraged in the 2005 BOSC review. Additionally, the program plans to meet its efficiency goal of reducing the average time for processing research grants to 277 days.

As evidence of the utility of its research, the Ecological research program strives, by 2009, to have forty states use a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of programs and policies. The program also aims to make further improvements in its bibliometric analysis results, and is targeting a "highly cited" publication rate of 21.4%, and a "high impact" publication rate of 21.3%. Improvements in the percentage of program publications deemed "highly cited" and "high impact" demonstrates increased quality and utility of the program's research. The program also plans to meet 100% of its planned outputs in support of each long-term goal while increasing efficiency. As a measure of efficiency, the program plans to continue working to decrease its percent variance from planned cost and schedule, a measure that the National Academy of Sciences is currently reviewing as part of a study to determine the best approach for measuring the efficiency of research. In achieving these targets, the programs will enable EPA to meet its goal of providing scientifically sound guidance and policy decisions related to human health and ecosystems.

FY 2009 Change from FY 2008 Enacted (Dollars in Thousands):

- (+$3,600.0 / +4.0 FTE) This reflects an increase in resources to advance the timetable to achieve goals identified in the EPA Nanomaterial Research Strategy: supporting health and ecological implications arising from new routes of exposure and/or toxicities associated with exposure to these novel materials; identifying and developing risk assessment methodologies for use by agency risk assessors; and evaluating the adequacy of current exposure assessment approaches. The change in workyears reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. It is an internal redirection of workyears from human health research to support the nanotechnology research effort.

- (+$1,000.0) This increase will support research to advance environmental monitoring and assessment. This work will take advantage of the Small Business Innovation Research (SBIR) program to develop sensor-based technologies for real-time monitoring of critical chemical and biological parameters.

- (+$3,085.0 / -0.9 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to technical changes such as realignment of IT, travel or other support costs across programs.

- (-$6,000.0) This reduction is the result of a Congressionally directed increase included in the FY 2008 Omnibus for basic human health research, including STAR grants and exposure research.

- (-$4,000.0) This reflects a Congressionally directed increase included in the FY 2008 Omnibus appropriation for the Environmental Monitoring and Assessment Program (EMAP). This increase funds monitoring efforts on U.S. aquatic resources.

- (-$3,397.0) This reduces funding for lower-priority human health research, including planned observational studies for asthma exposure data, and STAR grants on susceptible

populations not related to the Children's Centers. All high priority human health research will continue.

- (-$1,401.0 / -21.8 FTE) This reflects realignment of programmatic and support workyears between the human health and ecosystems, land protection and restoration, drinking water, and computational toxicology research programs and recalculation of their associated support costs to more closely align with programmatic priorities. The change in workyears reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

- (-$1,153.0) This reduction discontinues the grant portion of the Greater Research Opportunities (GRO) program. Half of these resources for GRO grants will be redirected to support GRO fellowships in the Fellowships Program. The Agency will continue to manage GRO grants awarded prior to FY 2009. This realignment will allow the GRO program to better meet the Agency's goals.

- (-$24.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

Statutory Authority:

CAA; SDWA; ERDDA; CWA; FIFRA; FFDCA; RCRA; FQPA; TSCA; USGCRA.

Program Area: Research: Land Protection

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$10,907.3***	***$10,737.0***	***$10,591.0***	***$13,350.0***	***$2,759.0***
Leaking Underground Storage Tanks	$657.0	$660.0	$650.0	$413.0	($237.0)
Oil Spill Response	$841.3	$901.0	$887.0	$704.0	($183.0)
Hazardous Substance Superfund	$23,859.1	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Total Budget Authority / Obligations	$36,264.7	$32,379.0	$31,896.0	$35,488.0	$3,592.0
Total Workyears	134.1	141.3	141.3	154.7	13.4

Program Project Description:

Research performed under the Land Research program supports scientifically defensible and consistent decision-making for Resource Conservation and Recovery Act (RCRA) material management, corrective action, and emerging materials. Research under this program has been evolving from waste disposal to beneficial re-use, avoidance of more toxic materials, and operation of waste management to conserve capacity and produce energy. To address emerging material management issues a strategic shift in the research program was made to focus on nanomaterial fate and transport. Research within this program addresses resource conservation and material reuse issues, the application of models and tools to support the Brownfield program, application of alternative landfill covers and the benefits of landfill bioreactors.

Research efforts are guided by the Land Research Program Multi-Year Plan (MYP)[77], developed with input from across the Agency, which outlines steps for meeting the needs of the Research and Development program's clients and for evaluating progress through annual performance goals and measures. Specific human health risk and exposure assessments and methods are discussed and conducted under the Human Health Risk Assessment program.

The Land Protection and Restoration research program was externally reviewed by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—in FY 2006 (December 2005). The BOSC found that the program generates high quality products and conducts appropriately focused multi-disciplinary research, and "the research conducted…is making its way to end users."[78] The BOSC recommended increased focus on emerging issues and the strategic priority of nanomaterial

[77] EPA, Office of Research and Development, *Land Research Program*. Washington, D.C.: EPA. For more information, see http://www.epa.gov/osp/myp.htm#land

[78] BOSC Land Restoration and Preservation Research Subcommittee Report. For more information, see http://www.epa.gov/OSP/bosc/pdf/land0603rpt.pdf

environmental and human health issues. Additional suggestions from both the SAB review and the BOSC review also are being incorporated into the research program.

FY 2009 Activities and Performance Plan:

EPA will continue to collaborate with the private sector to conduct field sampling of contaminated sites. In addition, EPA will work with states to optimize operations and monitoring of several landfill bioreactors and determine their potential to provide alternative energy in the form of landfill gas while increasing the nation's landfill capacity. The BOSC evaluation found that this research, which directly contributes to the Land Restoration long-term goal, "will help states and facility owners pursue R & D permitting of these forward-thinking land disposal options." Recovering landfill space by accelerating waste degradation is an alternative approach to meeting EPA's Solid Waste and Emergency Response program's draft strategic target of decreasing landfill disposal and incineration by 11 million tons. The Agency works with the Association of State and Tribal Solid Waste Management Officials (ASTSWMO) to assist in the communication of research results on landfill bioreactors to the states.

Revitalization of previously used land (e.g., Brownfields) does not always occur due to obstacles related to real and/or perceived contamination. EPA will continue to develop a site specific management approach for brownfields and develop validated acceptable practices for land revitalization. This includes development of GIS and Remote Sensing tools to inventory Brownfield sites as well as publishing the updated SMARTe 2009 edition decision support tool.

In response to BOSC recommendations, EPA has shifted work under this program to address nanotechnology research (FY 2009 Request, $14.9 million, including $2.7 million in the Land research program and $11.8 million in the Human Health and Ecosystem research program**),** including fate and transport research issues. The primary objective, for nanotechnology fate and transport research, will be to determine the physicochemical properties controlling the movement of nanomaterials through soil and aquatic ecosystems. Research questions include the identification of system parameters that alter the surface characteristics of nanomaterials through aggregation (*e.g.*, pH effects), complexation (*e.g.*, surface complexation by dissolved organic carbon) or changes in oxidation state (*e.g.*, chemical- or biological-mediated electron transfer). Lifecycle issues will also be addressed as part of the broader EPA research efforts into nanotechnology.

The Agency's efforts are coordinated with other Federal agencies through the National Nanotechnology Initiative (NNI),[79] which the Administration has identified as a FY 2009 research and development budget priority.[80] EPA's nanotechnology research also is guided by the EPA white paper[81] and EPA's Research and Development programs Nanotechnology Research Strategy.

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[79] For more information, see http://www.nano.gov/.

[80] Executive Office of the President, Office of Management and Budget and Office of Science and Technology Policy, *FY 2008 Administration Research and Development Budget Priorities.* Washington, D.C.: OMB (2006), 5. See http://www.whitehouse.gov/omb/memoranda/fy2006/m06-17.pdf.

[81] Environmental Protection Agency, *Nanotechnology White Paper (Washington: EPA, 2006).* Available at: http://www.epa.gov/osa/nanotech.htm.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2006 (PART) review, which was conducted under the program title "Land Protection and Restoration Research."[82] This "adequate" rating was supported by findings that the program had long-term and annual output performance measures in place that reflected the purpose of the program, as well as a strong strategic and evaluation approach. In response to OMB recommendations following the 2006 PART, the program has established a process by which the BOSC will assign a performance rating to each program long-term goal as part of its reviews. These ratings will provide the data for new program long-term outcome measures that will be instated. Using the progress rating expected from the 2008 BOSC review, the program will be able to set appropriate future year targets. Additionally, to address OMB's recommendation that the program establish an outcome-oriented efficiency measure, EPA has initiated a National Academy of Sciences (NAS) study to determine the most appropriate approach. Further, to improve its collection of partner performance information, EPA's Research and Development program is updating its Policy and Procedures Manual on Extramural Resources Management to require that all research and development grants, contracts, and cooperative agreements be linked to one or more Multi-Year Plan Long-Term Goals (LTGs).

Performance Targets:

Work under this program supports EPA's Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes. Performance measures for this specific program project are included under the Superfund Land Protection and Restoration program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,192.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$400.0) This reflects an increase in resources to advance the timetable to achieve goals identified in the ORD Nanomaterial Research Strategy. The primary objective of research conducted is to determine the release points of engineered nanomaterials into the environment and the physico-chemical properties controlling the transport and transformation of nanomaterials in environmental media. This will provide the basis for prioritizing potential human health and ecological exposure pathways that warrant further investigation.

- (+$817.0 / +9.4 FTE) This reflects a redirection of work years and resources from the Water Quality and Human Health research programs to support nanotechnology research, provide research support for the scientific workforce within the land program and a realignment of support workyears to reflect programmatic priorities.

[82] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

- (+$350.0 / -1.0 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SWDA; HSWA; ERDDA; SARA; CERCLA; RCRA; OPA; BRERA.

Program Area: Research: Sustainability

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$24,864.5***	***$22,478.0***	***$22,127.0***	***$19,970.0***	***($2,157.0)***
Hazardous Substance Superfund	$212.3	$0.0	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$25,076.8	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Total Workyears	81.4	76.2	76.2	70.8	-5.4

Program Project Description:

EPA's Science and Technology for Sustainability (STS) program is designed to advance sustainability goals. Sustainable and preventive approaches to health and environmental problems have increasingly become the Agency's focus since the Pollution Prevention Act of 1990. As defined in the Brundtland Report[83], sustainability is development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable approaches require: innovative design and production techniques that minimize or eliminate environmental liabilities; integrated management of air, water, and land resources; and changes in the traditional methods of creating and distributing goods and services. In addition to conducting research related to human health and environmental threats, EPA is committed to promoting sustainability—achieving economic prosperity while protecting natural systems and quality of life for the long-term.

The Science Advisory Board's (SAB) Environmental Engineering Committee reviewed EPA's Sustainability Research Strategy[84] and the Science and Technology for Sustainability Multi-Year Plan in June 2006. The SAB stated that it "strongly endorses the Agency's proposal to establish a research program focused on sustainability because the results from such a program will improve the scientific foundation for a sustainable environment."[85] The STS research program contains several new elements, such as the development of metrics and systems-based environmental management practices, as a result of this review. Ongoing efforts include: 1) a multi-disciplinary Sustainable Environmental Systems program; 2) a decision support tools program which has championed the use of life cycle assessment methods and 3) the People, Prosperity, and the Planet (P3) Student Design Competition for Sustainability. In addition, the STS research program was reviewed by EPA's Board of Scientific Counselors (BOSC) in FY

[83] For more information see, http://habitat.igc.org/open-gates/wced-ocf.htm
[84] For more information see, http://www.epa.gov/sustainability/pdfs/EPA-12057_SRS_R4-1.pdf
[85] For more information see, http://yosemite.epa.gov/sab%5Csabproduct.nsf/D24960CAEE6ECCAB852572FE00704EC0/$File/sab-07-007.pdf

2007 (April 2007). The BOSC will soon release a report on the program's quality and performance.

The STS Research Program is designed to ultimately position EPA's Research and Development program to provide technical support to regional and national sustainability policies and initiatives. Toward this end the STS Research Program has established the following areas of emphasis:

- *Sustainability Metrics:* As sustainable solutions to environmental problems are developed and implemented, there is a need to measure the progress and impact of these efforts. The research in this area is focused on developing scientifically-based sustainability metrics and indices that will provide policy makers and citizens with a suite of measurement tools that are both readily accessible and easily understood. The long-term objective is to develop sustainability metrics for use in a variety of applications, including technology evaluation, regional ecosystem and watershed management and more general measurements that are suitable for use in the Agency's Report on the Environment.

- *Decision Support Tools*:[86] This research creates tools and methods for use by public and private sector decision makers to support the achievement of sustainable outcomes. This effort is built on the foundation of Life Cycle Analysis (LCA) techniques that address the sustainability of alternative policy options, production pathways, and product usage by describing the full environmental impact of each alternative. This work encompasses both core research (in furthering methods and techniques) and applied research (with tools for specific clients, i.e. TRACI, the Tool for Reduction and Assessment of Chemical and Other Environmental Impacts).

- *Technologies:* This research emphasizes the role that technologies have in creating sustainable outcomes. Through programs such as the Small Business Innovation Research (SBIR) program and the People, Prosperity, and Planet (P3) student design competition, emphasis will be placed on finding solutions to client-driven problems while promoting sustainable design and implementation practices.

    - *Small Business Innovation Research (SBIR) Program*:[87] As required by the Small Business Act as amended,[88] EPA sets aside 2.5% of its extramural research budget for contracts to small businesses to develop and commercialize new environmental technologies.
    - *People, Prosperity, and the Planet (P3):*[89] P3 is a student competition to develop solutions to sustainability challenges. For example, a joint student team from Oberlin College and Brown University created a low-cost system that students

[86] For more information, see http://www.epa.gov/ord/NRMRL/std/sab.
[87] For more information, see http://es.epa.gov/ncer/sbir.
[88] U.S. Public Law 219. 79th Congress, 2nd session, 22 July 1982. *Small Business Innovation Development Act of 1982.* More information is available at: http://thomas.loc.gov/cgi-bin/bdquery/z?d097:s.881:.
[89] For more information, see http://es.epa.gov/ncer/p3.

can use to monitor energy and water consumption at various scales, from individual dormitory floors to their entire college campus.

Over the long term, the STS Program will promote and support national and regional sustainability policies and initiatives by ensuring that decision-makers within the EPA and at the local, regional and national levels have a scientifically sound set of management tools that promote stewardship and sustainability outcomes.

FY 2009 Activities and Performance Plan:

In FY 2009, the Science and Technology for Sustainability (STS) research program will continue its focus on sustainability metrics and decision support tools. Some specifics are outlined below.

In the area of sustainability metrics, research in FY 2009 will focus on both technology and systems metrics. An applied technology metrics problem will be initiated to validate in-house research efforts. EPA will continue a project to develop scientifically-based sustainability metrics for use in evaluating innovative technologies. Systems metrics represents the measurement of energetic resources, human health, ecological burden (i.e., water, biota, air), and overall system function and health in a broader regional scale. The San Luis Valley Project will be working on the development and application of a set of five sustainability metrics (ecological and economic) to be used by environmental managers in their efforts to support sustainable outcomes in the San Luis Valley of Colorado. Also, building upon the in-house research effort, the program is beginning research on sustainability metrics for use in future Reports on the Environment.

Planned research in decision support tools includes efforts to further develop a streamlined in-house Life Cycle Assessment methodology and incorporate material flow concepts into these tools. The program will complete an environmental impact assessment model for land use and continue work on a water use model. A collaborative research project applying sustainability metrics to management of regional ecosystems will be established and work will continue on extending an auction-based management approach to urban wet weather flow.

The EPA also will continue to fund the development of new innovative technologies through the P3 program and to advance the development of international environmental technology testing protocols and a global environmental technology network. The Agency will continue to develop a report to document the impact of technology verifications on achieving sustainable outcomes.

In 2003, EPA's sustainability research program, under the program title Research: Pollution Prevention and New Technologies Research, received a "results not demonstrated" in its PART review. The program was rated "results not demonstrated" due to its lack of adequate strategic planning and performance measures. However, EPA has taken steps to address these deficiencies through the development of the Science and Technology for Sustainability Multi-Year Plan as well as annual and long term performance and efficiency measures that will be finalized in consultation with OMB.

Performance Targets:

Work under this program supports EPA's Strategic Plan Objective 5.4: Enhance Science and Research. Currently, there are no PART performance measures for this specific program project. However, the program monitors performance including the timely completion of research milestones and the citation rates of research publications. The program expects to formalize these and other performance measures during Spring 2008. Additionally, the program began implementing a new efficiency measure in 2007 to track the "Percent variance from planned cost and schedule." In response to a PART follow-up action and the recently issued report by The National Academies on "Evaluating Research Efficiency in the U.S. Environmental Protection Agency," EPA plans to review this measure and consult with OMB about how best to measure efficiency going forward.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$1,600.0 / -3.1 FTE) This reflects a reduction to resources for the sustainability program, including the Small Business Innovation Research program. Although work will continue, the reduction will delay the development of metrics to assess new technologies. However, highest priority work, such as the development of easily accessible and understandable sustainability metrics, the sustainability of alternative policy options based on Life Cycle Analysis, and new technologies developed through P3, will continue without delay.

- (+$464.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$471.0) This reduction reflects efficiencies associated with resources that provide organization-wide support, for example, funding for operating expenses, capital equipment, repairs and improvements, and the use of contract resources, and efficiencies associated with IT and telecommunications support resources, including high-performance computing.

- (-$125.0) This reflects a consolidation of the Agency's program evaluation efforts.

- (-2.3 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. This is part of a technical realignment of FTE across all programs to reflect programmatic priorities. There are no programmatic or performance impacts.

- (-$425.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CAA; CWA; FIFRA; PPA; RCRA; SDWA; SBA; SARA; TSCA; ERDDA.

Program Area: Toxic Research and Prevention

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	***$29,425.2***	***$24,795.0***	***$24,459.0***	***$26,568.0***	***$2,109.0***
Total Budget Authority / Obligations	$29,425.2	$24,795.0	$24,459.0	$26,568.0	$2,109.0
Total Workyears	125.5	126.3	126.3	137.4	11.1

Program Project Description:

The Pesticides and Toxics research program is a multidisciplinary program that examines risks resulting from exposure to pesticides and toxic chemicals. The research is designed to support the Agency's efforts to reduce current and future risks to the environment and to humans by preventing and/or controlling the production of new chemicals and products of biotechnology that pose unreasonable risk, as well as assessing and reducing the risks of chemicals and products of biotechnology already in commerce. This research complements work conducted under the Human Health and Ecosystem Research, the Human Health Risk Assessment, and the Endocrine Disruptors Research programs. The development and validation of methods and models and assessments for predicting risks from pesticides, toxic substances, and products of biotechnology to human health and ecosystems are conducted under the Pesticides and Toxics research program.

Research is guided by the Biotechnology Research Strategy[90] and the Wildlife Research Strategy,[91] both of which were developed with participation from major clients (*e.g.* EPA's Prevention, Pesticides and Toxic Substances program and the Regional Offices). The strategies outline the research needs and priorities. The Agency also maintains a Safe Pesticides/Safe Products (SP2) multi-year plan (MYP)[92] that outlines steps for meeting these needs, as well as annual performance goals and measures for evaluating progress.

The program's long-term performance measures rate the utility of its methods, models, and data for use by EPA's Prevention, Pesticides and Toxic Substances program and other organizations. The research program's three major goals are: (1) to provide predictive tools to prioritize testing requirements; enhance interpretation of data to improve human health and ecological risk assessments; and inform decision-making regarding high priority pesticides and toxic substances;

[90] U.S. EPA, Office of Research and Development. *Biotechnology Research Strategy*. Washington, DC: EPA. Available at: http://www.epa.gov/nheerl/publications/files/biotechnology_research_program_4_8_05.pdf.
[91] U.S. EPA, Office of Research and Development, *Wildlife Research Strategy*. Washington, D.C.: EPA. Available at: http://www.epa.gov/nheerl/publications/files/wildlife_research_strategy_2_2_05.pdf.
[92] U.S. EPA, Office of Research and Development, Safe Pesticides/Safe Products Multi-Year Plan. Washington, D.C.: EPA (2003). Available at: http://www.epa.gov/osp/myp/sp2.pdf.

(2) to develop probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants; and (3) to provide the tools necessary to make decisions related to products of biotechnology.

In February 2007, the Pesticides and Toxics research program underwent an external peer review by EPA's research advisory committee, the Board of Scientific Counselors (BOSC), which commended the progress and direction of the research and provided recommendations for improvement.[93] The BOSC stated that "SP2 is a very successful program. The research is of high quality and is focused on well-articulated goals. Its relevance to the Agency's mission is clear and apparent, and the SP2 Program fills a unique niche within the Agency, and serves the needs of OPPTS, its major client, very well." The BOSC also noted that, "the scientists involved in these projects are internationally recognized and their findings and organized panels serve to establish regulatory guidance around the world."

FY 2009 Activities and Performance Plan:

In FY 2009, research will continue to provide the scientific foundation for the three major goals of the Pesticides and Toxics research program.

EPA will provide research on methods, models, and data to support prioritization of testing requirements, enhanced interpretation of data to improve human health and ecological risk assessments, and decision-making regarding specific individual or classes of pesticides and toxic substances that are of high priority. This research will develop/validate:

- predictive biomarkers of neurotoxic effects for major classes of pesticides;
- alternative test methods for the hazard identification of developmental neurotoxicants;
- virtual chemical screening methods for risk-based prioritization and ranking needs for chronic non-cancer effects; and
- quantitative structure activity relationships (QSARs) to relate various structural descriptions of molecules to toxicity endpoints.

Research conducted in FY 2009 will support the development of probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants. This research directly supports Agency efforts to assure that endangered species are protected from pesticides while making sure farmers and communities have the pest control tools they need. Four key components of this research are:

- extrapolation among wildlife species and exposure scenarios of concern;
- population biology to improve population dynamics in spatially-explicit habitats;
- models for assessing the relative risk of chemical and non-chemical stressors; and
- models to define geographical regional/spatial scales for risk assessment.

[93] U.S. EPA, Office of Research and Development, SP2 Research Program Review. Washington, D.C. (2007). Available at: http://www.epa.gov/osp/bosc/pdf/sp2072307rpt.pdf.

Methods for characterization of population-level risks of toxic substances to aquatic life and wildlife also will be developed. Results of this research will help the Agency meet the long-term goal of developing scientifically valid approaches for assessing spatially-explicit, population-level risks to wildlife populations and non-target plants and plant communities from pesticides, toxic chemicals and multiple stressors while advancing the development of probabilistic risk assessment. This supports the Agency's obligation under the Endangered Species Act.

Additionally, EPA will provide biotechnology research to support decision-making related to products of biotechnology, although the scope of the research program will be reduced. Through its Science to Achieve Results (STAR) program, methods are being developed to assess the potential allergenicity of genetically engineered plants.

The Office of Management and Budget (OMB) rated the program as "moderately effective" in a 2007 Program Assessment Rating Tool (PART) review, which was conducted under the program title "Pesticides and Toxics Research."[94] This rating was attributed to OMB findings that an independent expert review by the BOSC determined the program was effective and achieving results, that the program was very well coordinated with the Prevention, Pesticides and Toxic Substances program, and that the program had long-term and annual performance measures in place. In response to OMB recommendations following the 2007 PART, the program is currently: 1) developing a formal response to the BOSC report, addressing action items, and making progress toward long-term and annual targets, 2) assessing the current efficiency measure to determine how best to capture the cost effectiveness of research activities, and 3) developing a system to utilize quarterly performance measurement reporting to improve program performance.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent variance from planned cost and schedule.				-6	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal one.	100	86	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Percentage of planned outputs delivered in support of the SP2	80	100	100	100	Percent

[94] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10009012.2007.html.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	program's long-term goal three.					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal two.	100	100	100	100	Percent

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, community, and ecosystems, with a focus on pesticides and toxic chemicals.

The program gauges its annual and long-term success in meeting this objective by assessing its progress on several key measures. In 2009, the program strives to complete 100% of its planned outputs in support of its three long-term goals. Additionally, to make improvements in efficiency, the program aims to decrease its variance from planned cost and schedule to -6%, a measure that the National Academy of Sciences is reviewing as part of its study to determine the best approach for measuring the efficiency of research. Achieving these targets will enable the Agency to make well-informed guidance and policy decisions related to pesticides.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$854.0 / +14.3 FTE) This increase is the result of a consolidation of FTE and associated resources from the Human Health and Ecosystems program to support research on spatially explicit exposure assessment tools that integrate data. In particular, wildlife risk assessment will be transferred from the ecosystems research program to the pesticides and toxics program to align with the primary client regulatory program, the Prevention, Pesticides and Toxic Substances program. This also includes a realignment of resources that provide organization-wide support, such as operating expenses and travel.

- (+$845.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$1,410.0 / -0.2 FTE) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. These funds also will be used in support of pesticides and toxics research.

- (-$1,000.0 / -3.0 FTE) This reduces funding for the Agency's biotechnology research to understand the impact of genetically modified crops on the environment. This reduction would minimize the impact to the highest priority work in the pesticides and toxics

research program, such as research to support the development of probabilistic risk assessment methods.

Statutory Authority:

FQPA; FIFRA; TSCA; CWA; CAA; ERDDA.

Program Area: Water: Human Health Protection

Drinking Water Programs
Program Area: Water: Human Health Protection
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$100,323.2	$96,967.0	$96,722.0	$99,476.0	$2,754.0
Science & Technology	***$3,256.6***	***$3,416.0***	***$3,375.0***	***$3,559.0***	***$184.0***
Total Budget Authority / Obligations	$103,579.8	$100,383.0	$100,097.0	$103,035.0	$2,938.0
Total Workyears	564.7	584.1	584.1	583.4	-0.7

Program Project Description:

This program provides technical support to drinking water programs through the Technical Support Center (TSC), which evaluates engineering and scientific data (including treatment technology information) to establish its applicability to the drinking water program's needs; develops and implements regulations to support national occurrence surveys and assists in the assessment of the contaminant occurrence data resulting from those surveys; develops and evaluates monitoring approaches and analytical methods, including assessing data provided by others to demonstrate the effectiveness of new/alternate analytical methods; trains Regional and State Certification Officers and develops guidelines for the drinking water laboratory certification program; works with Regions and states to help drinking water utilities better understand their treatment and distribution systems and implement improvements to optimize performance; and provides other technical support to develop and implement National Primary Drinking Water Regulations (NPDWRs). The Center also provides external technical assistance in support of EPA Regional and state drinking water programs.

(See http://www.epa.gov/safewater/ for more information.)

FY 2009 Activities and Performance Plan:

In FY 2009, the drinking water technical support program will:

- Provide technical and scientific support for the development and implementation of drinking water regulations. This includes the development of methods for updating rules and responding to technical implementation questions regarding the entire range of NPDWRs, including the Surface Water Treatment Rule; Long Term 1 and 2 Enhanced Surface Water Treatment Rules ("LT1" and "LT2," respectively); Stage 1 and 2 Disinfectants and Disinfection Byproducts Rules ("Stage 1" and "Stage 2," respectively); Total Coliform Rule; Lead and Copper Rule; and Arsenic Rule. TSC also manages the Quality Assurance and Laboratory Approval programs that support implementation of the LT2 Rule.

- Continue to implement EPA's Drinking Water Laboratory Certification Program. This program sets standards and establishes methods for EPA, state, and privately-owned labs that analyze drinking water samples. Through this program, EPA also will conduct three Regional program reviews during FY 2009. TSC visits each Regional Office on a triennial basis and evaluates their oversight of the state labs and the state laboratory certification programs within their purview.

- Support small drinking water systems' efforts to optimize their treatment technology under the drinking water treatment Area Wide Optimization Program (AWOP). AWOP is a highly successful technical assistance and training program that enhances the ability of small systems to meet existing and future microbial, disinfectant, and disinfection byproducts standards. By the end of 2009, EPA expects that 30 states and 6 Regional Offices will be working to establish, strengthen, and enhance AWOPs. In addition, EPA will expand the scope of the program technical content to incorporate distribution system integrity elements into the performance-based training approach to facilitate the transfer of key skills specific to groundwater systems and distribution system components. The performance-based training brings together a group of public water supply operators from different localities for a series of sessions where they learn key operational and problem solving skills. Each skill is needed to enable operators to address the factors limiting optimized performance of their plant.

- Manage the implementation of Unregulated Contaminant Monitoring Rules (UCMR2). This involves the coordination and review of sampling plans, certification of laboratories, and review and validation of data.

- Support the Partnership for Safe Water, a national voluntary collaborative effort between the water industry and EPA to pursue optimization of the drinking water treatment infrastructure to maximize public health protection.

- Provide analytical method development/validation to enable implementation of the nation's drinking water compliance-monitoring and occurrence data gathering.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89	89	89.5	90	Percent Systems

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	91.5	94	90	90	Percent Population

The two performance measures displayed above are representative of the work carried out under this program. These measures were developed in related PARTs: the Drinking Water State Revolving Fund, Public Water System Supervision Grant program and Underground Injection Control Grant program. There are no current PART measures specifically for this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$78.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$106.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SDWA.

Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification

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APPROPRIATION: Environmental Program & Management
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management					
Budget Authority	$2,321,877.0	$2,298,188.0	$2,327,962.0	$2,335,562.0	$7,600.0
Total Workyears	10,652.2	10,867.0	10,849.7	10,796.1	-53.6

Program Projects in EPM
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Air Toxics and Quality					
Clean Air Allowance Trading Programs	$18,621.2	$19,388.0	$19,131.0	$19,898.0	$767.0
Federal Stationary Source Regulations	$22,744.8	$26,504.0	$26,091.0	$26,787.0	$696.0
Federal Support for Air Quality Management					
Clean Diesel Initiative	$97.9	$0.0	$0.0	$0.0	$0.0
Federal Support for Air Quality Management (other activities)	$95,478.1	$90,490.0	$89,464.0	$95,538.0	$6,074.0
Subtotal, Federal Support for Air Quality Management	$95,576.0	$90,490.0	$89,464.0	$95,538.0	$6,074.0
Federal Support for Air Toxics Program	$25,081.8	$24,711.0	$24,390.0	$22,693.0	($1,697.0)
Radiation: Protection	$10,172.7	$10,186.0	$10,057.0	$10,533.0	$476.0
Radiation: Response Preparedness	$2,809.7	$2,928.0	$2,882.0	$2,941.0	$59.0
Stratospheric Ozone: Domestic Programs	$5,280.0	$4,489.0	$5,119.0	$4,696.0	($423.0)
Stratospheric Ozone: Multilateral Fund	$11,315.0	$9,865.0	$9,711.0	$9,865.0	$154.0
Subtotal, Air Toxics and Quality	$191,601.2	$188,561.0	$186,845.0	$192,951.0	$6,106.0
Brownfields					
Brownfields	$25,838.4	$23,450.0	$23,665.0	$22,732.0	($933.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Climate Protection Program					
Climate Protection Program					
Energy STAR	$38,573.4	$43,926.0	$48,236.0	$44,221.0	($4,015.0)
Methane to markets	$2,351.1	$4,436.0	$4,369.0	$4,546.6	$177.6
Asian Pacific Partnership	$3,203.0	$5,000.0	$0.0	$5,000.0	$5,000.0
Greenhouse Gas Reporting Registry	$0.0	$0.0	$3,445.0	$0.0	($3,445.0)
Climate Protection Program (other activities)	$47,124.6	$34,565.0	$34,324.0	$33,240.4	($1,083.6)
Subtotal, Climate Protection Program	$91,252.1	$87,927.0	$90,374.0	$87,008.0	($3,366.0)
Subtotal, Climate Protection Program	$91,252.1	$87,927.0	$90,374.0	$87,008.0	($3,366.0)
Compliance					
Compliance Assistance and Centers	$28,226.9	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
Compliance Incentives	$9,448.8	$9,786.0	$10,618.0	$10,263.0	($355.0)
Compliance Monitoring	$90,724.6	$93,428.0	$88,726.0	$96,025.0	$7,299.0
Subtotal, Compliance	$128,400.3	$132,761.0	$127,069.0	$132,723.0	$5,654.0
Enforcement					
Civil Enforcement	$123,003.7	$126,645.0	$129,886.0	$133,017.0	$3,131.0
Criminal Enforcement	$39,721.6	$39,688.0	$40,742.0	$44,384.0	$3,642.0
Enforcement Training	$2,668.3	$3,145.0	$3,096.0	$3,043.0	($53.0)
Environmental Justice	$6,319.2	$3,822.0	$6,399.0	$3,811.0	($2,588.0)
NEPA Implementation	$13,863.5	$14,366.0	$14,142.0	$16,295.0	$2,153.0
Subtotal, Enforcement	$185,576.3	$187,666.0	$194,265.0	$200,550.0	$6,285.0
Environmental Protection / Congressional Priorities					
Congressionally Mandated Projects	$25,478.3	$0.0	$13,437.0	$0.0	($13,437.0)
Geographic Programs					
Geographic Program: Chesapeake Bay	$20,274.1	$28,768.0	$30,528.0	$29,001.0	($1,527.0)
Geographic Program: Great Lakes	$23,522.7	$21,757.0	$21,686.0	$22,261.0	$575.0
Geographic Program: Long Island Sound	$1,361.4	$467.0	$4,922.0	$467.0	($4,455.0)
Geographic Program: Gulf of Mexico	$4,407.4	$4,457.0	$5,618.0	$4,578.0	($1,040.0)
Geographic Program: Lake Champlain	$997.0	$934.0	$2,707.0	$934.0	($1,773.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Geographic Program: Other					
San Francisco Bay	$0.0	$0.0	$4,922.0	$0.0	($4,922.0)
Geographic Program: Puget Sound	$1,162.3	$1,000.0	$19,688.0	$1,000.0	($18,688.0)
Lake Pontchartrain	$969.4	$978.0	$963.0	$978.0	$15.0
Community Action for a Renewed Environment (CARE)	$2,515.0	$3,448.0	$3,394.0	$2,448.0	($946.0)
Geographic Program: Other (other activities)	$5,057.5	$3,149.0	$3,105.0	$3,289.0	$184.0
Subtotal, Geographic Program: Other	$9,704.2	$8,575.0	$32,072.0	$7,715.0	($24,357.0)
Regional Geographic Initiatives	$6,302.5	$9,553.0	$0.0	$4,844.0	$4,844.0
Subtotal, Geographic Programs	$66,569.3	$74,511.0	$97,533.0	$69,800.0	($27,733.0)
Homeland Security					
Homeland Security: Communication and Information					
Laboratory Preparedness and Response	$888.7	$500.0	$492.0	$0.0	($492.0)
Homeland Security: Communication and Information (other activities)	$7,230.3	$6,406.0	$6,330.0	$6,940.0	$610.0
Subtotal, Homeland Security: Communication and Information	$8,119.0	$6,906.0	$6,822.0	$6,940.0	$118.0
Homeland Security: Critical Infrastructure Protection					
Decontamination	$52.8	$99.0	$97.0	$99.0	$2.0
Homeland Security: Critical Infrastructure Protection (other activities)	$9,502.7	$7,688.0	$7,568.0	$6,660.0	($908.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	$9,555.5	$7,787.0	$7,665.0	$6,759.0	($906.0)
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	$0.0	$3,380.0	$3,329.0	$3,412.0	$83.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$3,396.8	$1.0	$0.0	$0.0	$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$3,396.8	$3,381.0	$3,329.0	$3,412.0	$83.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$6,219.1	$6,345.0	$6,248.0	$6,415.0	$167.0

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Subtotal, Homeland Security	$27,290.4	$24,419.0	$24,064.0	$23,526.0	($538.0)
Indoor Air					
Indoor Air: Radon Program	$5,201.2	$5,429.0	$5,363.0	$5,488.0	$125.0
Reduce Risks from Indoor Air	$21,425.6	$21,440.0	$21,632.0	$19,180.0	($2,452.0)
Subtotal, Indoor Air	$26,626.8	$26,869.0	$26,995.0	$24,668.0	($2,327.0)
Information Exchange / Outreach					
Children and Other Sensitive Populations: Agency Coordination	$4,968.5	$6,203.0	$6,144.0	$6,309.0	$165.0
Environmental Education	$7,807.2	$0.0	$8,860.0	$0.0	($8,860.0)
Congressional, Intergovernmental, External Relations	$49,193.3	$49,747.0	$48,971.0	$49,756.0	$785.0
Exchange Network	$17,541.7	$15,364.0	$15,137.0	$18,058.0	$2,921.0
Small Business Ombudsman	$3,761.9	$3,261.0	$3,210.0	$3,217.0	$7.0
Small Minority Business Assistance	$2,437.3	$2,466.0	$2,428.0	$2,411.0	($17.0)
State and Local Prevention and Preparedness	$12,867.6	$12,960.0	$12,784.0	$13,298.0	$514.0
TRI / Right to Know	$14,605.5	$15,728.0	$15,504.0	$15,109.0	($395.0)
Tribal - Capacity Building	$10,861.3	$11,477.0	$11,328.0	$11,710.0	$382.0
Subtotal, Information Exchange / Outreach	$124,044.3	$117,206.0	$124,366.0	$119,868.0	($4,498.0)
International Programs					
US Mexico Border	$5,790.7	$4,646.0	$5,439.0	$0.0	($5,439.0)
Commission for Environmental Cooperation	$4,208.8	$4,022.0	$3,962.0	$0.0	($3,962.0)
Environment and Trade	$1,817.4	$1,945.0	$1,920.0	$0.0	($1,920.0)
International Capacity Building	$7,210.8	$5,311.0	$5,228.0	$0.0	($5,228.0)
POPs Implementation	$1,682.4	$1,831.0	$1,808.0	$0.0	($1,808.0)
International Sources of Pollution					
Mexico Border	$0.0	$0.0	$0.0	$4,902.0	$4,902.0
International Sources of Pollution (other activities)	$0.0	$0.0	$0.0	$7,506.0	$7,506.0
Subtotal, International Sources of Pollution	$0.0	$0.0	$0.0	$12,408.0	$12,408.0
Trade and Governance	$0.0	$0.0	$0.0	$6,216.0	$6,216.0
Subtotal, International Programs	$20,710.1	$17,755.0	$18,357.0	$18,624.0	$267.0
IT / Data Management / Security					

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Information Security	$4,291.9	$5,583.0	$5,504.0	$5,790.0	$286.0
IT / Data Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Subtotal, IT / Data Management / Security	$103,488.2	$96,602.0	$96,257.0	$100,150.0	$3,893.0
Legal / Science / Regulatory / Economic Review					
Administrative Law	$4,891.0	$5,260.0	$5,178.0	$4,949.0	($229.0)
Alternative Dispute Resolution	$970.5	$1,175.0	$1,160.0	$1,264.0	$104.0
Civil Rights / Title VI Compliance	$10,796.0	$11,240.0	$11,065.0	$11,097.0	$32.0
Legal Advice: Environmental Program	$38,242.4	$39,366.0	$39,480.0	$39,925.0	$445.0
Legal Advice: Support Program	$12,435.8	$13,986.0	$14,117.0	$14,442.0	$325.0
Regional Science and Technology	$3,399.8	$3,574.0	$3,518.0	$3,318.0	($200.0)
Regulatory Innovation	$22,498.4	$23,866.0	$21,327.0	$24,405.0	$3,078.0
Regulatory/Economic-Management and Analysis	$17,755.0	$20,104.0	$16,381.0	$20,588.0	$4,207.0
Science Advisory Board	$4,983.3	$4,790.0	$4,727.0	$5,083.0	$356.0
Subtotal, Legal / Science / Regulatory / Economic Review	$115,972.2	$123,361.0	$116,953.0	$125,071.0	$8,118.0
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$176,479.1	$165,817.0	$161,261.0	$164,866.0	$3,605.0
Utilities	$14,682.7	$8,210.0	$8,082.0	$11,333.0	$3,251.0
Security	$28,897.4	$25,344.0	$24,949.0	$25,676.0	$727.0
Facilities Infrastructure and Operations (other activities)	$107,894.9	$104,357.0	$102,897.0	$109,193.0	$6,296.0
Subtotal, Facilities Infrastructure and Operations	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Central Planning, Budgeting, and Finance	$64,431.2	$74,960.0	$73,949.0	$80,623.0	$6,674.0
Acquisition Management	$23,654.1	$29,992.0	$28,629.0	$31,195.0	$2,566.0
Financial Assistance Grants / IAG Management	$20,564.5	$23,439.0	$23,242.0	$25,977.0	$2,735.0
Human Resources Management	$39,740.2	$40,175.0	$39,760.0	$43,646.0	$3,886.0
Subtotal, Operations and Administration	$476,344.1	$472,294.0	$462,769.0	$492,509.0	$29,740.0
Pesticides Licensing					
Pesticides: Protect Human Health from Pesticide Risk	$0.0	$62,514.0	$61,819.0	$60,606.0	($1,213.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Pesticides: Protect the Environment from Pesticide Risk	$0.0	$41,750.0	$41,214.0	$41,215.0	$1.0
Pesticides: Realize the Value of Pesticide Availability	$0.0	$12,114.0	$11,959.0	$12,870.0	$911.0
Pesticides: Field Programs	$21,436.3	$0.0	$0.0	$0.0	$0.0
Pesticides: Registration of New Pesticides	$42,098.9	$0.0	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$54,442.2	$0.0	$0.0	$0.0	$0.0
Science Policy and Biotechnology	$1,202.9	$1,780.0	$1,752.0	$1,675.0	($77.0)
Subtotal, Pesticides Licensing	$119,180.3	$118,158.0	$116,744.0	$116,366.0	($378.0)
Resource Conservation and Recovery Act (RCRA)					
RCRA: Waste Management					
eManifest	$0.0	$4,000.0	$0.0	$2,000.0	$2,000.0
RCRA: Waste Management (other activities)	$65,599.8	$65,158.0	$66,297.0	$65,111.0	($1,186.0)
Subtotal, RCRA: Waste Management	$65,599.8	$69,158.0	$66,297.0	$67,111.0	$814.0
RCRA: Corrective Action	$39,373.3	$39,573.0	$39,076.0	$39,018.0	($58.0)
RCRA: Waste Minimization & Recycling	$12,506.2	$13,666.0	$13,495.0	$14,397.0	$902.0
Subtotal, Resource Conservation and Recovery Act (RCRA)	$117,479.3	$122,397.0	$118,868.0	$120,526.0	$1,658.0
Toxics Risk Review and Prevention					
Endocrine Disruptors	$9,855.8	$5,890.0	$8,663.0	$5,847.0	($2,816.0)
Toxic Substances: Chemical Risk Review and Reduction					
HPV/VCCEP	$12,239.0	$11,015.0	$12,049.0	$11,381.0	($668.0)
Toxic Substances: Chemical Risk Review and Reduction (other activities)	$32,462.7	$34,031.0	$33,623.0	$35,096.0	$1,473.0
Subtotal, Toxic Substances: Chemical Risk Review and Reduction	$44,701.7	$45,046.0	$45,672.0	$46,477.0	$805.0
Pollution Prevention Program	$17,548.6	$19,935.0	$16,362.0	$18,398.0	$2,036.0
Toxic Substances: Chemical Risk Management	$8,249.6	$5,654.0	$5,585.0	$6,027.0	$442.0
Toxic Substances: Lead Risk Reduction Program	$12,589.8	$13,546.0	$13,335.0	$13,652.0	$317.0

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Subtotal, Toxics Risk Review and Prevention	$92,945.5	$90,071.0	$89,617.0	$90,401.0	$784.0
Underground Storage Tanks (LUST / UST)					
LUST / UST	$9,836.7	$11,719.0	$11,572.0	$12,256.0	$684.0
Water: Ecosystems					
Great Lakes Legacy Act	$24,296.7	$35,000.0	$34,454.0	$35,000.0	$546.0
National Estuary Program / Coastal Waterways	$21,474.8	$17,203.0	$26,779.0	$17,239.0	($9,540.0)
Wetlands	$19,641.9	$21,518.0	$21,248.0	$22,223.0	$975.0
Subtotal, Water: Ecosystems	$65,413.4	$73,721.0	$82,481.0	$74,462.0	($8,019.0)
Water: Human Health Protection					
Beach / Fish Programs	$2,821.4	$2,830.0	$2,789.0	$2,795.0	$6.0
Drinking Water Programs	$100,323.2	$96,967.0	$96,722.0	$99,476.0	$2,754.0
Subtotal, Water: Human Health Protection	$103,144.6	$99,797.0	$99,511.0	$102,271.0	$2,760.0
Water Quality Protection					
Marine Pollution	$12,890.5	$12,851.0	$12,674.0	$13,185.0	$511.0
Surface Water Protection	$191,797.2	$196,092.0	$193,546.0	$198,706.0	$5,160.0
Subtotal, Surface Water Protection	$191,797.2	$196,092.0	$193,546.0	$198,706.0	$5,160.0
Subtotal, Water Quality Protection	$204,687.7	$208,943.0	$206,220.0	$211,891.0	$5,671.0
TOTAL, EPA	$2,321,879.5	$2,298,188.0	$2,327,962.0	$2,338,353.0	$10,391.0

Program Area: Air Toxics And Quality

Clean Air Allowance Trading Programs
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$18,621.2***	***$19,388.0***	***$19,131.0***	***$19,898.0***	***$767.0***
Science & Technology	$8,661.1	$8,259.0	$9,115.0	$8,259.0	($856.0)
Total Budget Authority / Obligations	$27,282.3	$27,647.0	$28,246.0	$28,157.0	($89.0)
Total Workyears	86.6	89.1	89.1	88.6	-0.5

Program Project Description:

The Acid Rain Program, established under Title IV of the Clean Air Act Amendments of 1990, requires major reductions in Sulfur Dioxide (SO_2) and Nitrogen Oxide ($NO_{x)}$ emissions from electric utilities. The authorizing legislation specifies two phases and numerous deadlines for both the SO_2 and NO_x program components. The U.S. also is committed, under the US-Canada Air Quality Agreement of 1991, to making reductions in SO_2 and NO_x emissions. EPA's Acid Rain Program provides affected sources flexibility to select their own methods of compliance so the required emission reductions are achieved at the lowest cost (both to industry and government).

The SO_2 program component uses a market-based approach with tradable units called "allowances" (one allowance authorizes the emission of one ton of SO_2) and sets a permanent cap in 2010 on the total amount of SO_2 that may be emitted by affected sources at approximately one-half the amount these sources emitted in 1980. Both the SO_2 and NO_x program components require accurate and verifiable measurement of emissions.

The Acid Rain Program continues to be recognized as a model for flexible and effective air pollution regulation, both in the U.S. and abroad. The Clean Air Interstate Air Quality Rule (CAIR) is modeled after the Acid Rain SO_2 program and relies on existing authorities to reduce emissions which contribute to interstate air pollution transport and interfere with other states' ability to meet the $PM_{2.5}$ and ozone standards. Using a market-based approach for both SO_2 and NO_x emissions, CAIR is projected to reduce pollution from electrical power generation sources in the covered states by close to 70 percent, when fully implemented. For additional information on the Acid Rain Program, please visit http://www.epa.gov/acidrain/.

At the request of the states, EPA has administered the NO_x Budget Program (NBP), a market-based cap and trade program for reducing NO_x emissions and transported ozone in the eastern U.S., for almost a decade. The initial program under the Ozone Transport Commission (OTC) began in 1999. The OTC program ended as a separate entity in 2003, integrating fully with the broader Regional NBP under the NO_x State Implementation Plan (SIP) Call. Affected NBP

sources include boilers, turbines, and combined cycle units from a diverse set of industries as well as electric utility units.

In 2008, the NBP will have expanded to 20 states and D.C. and required NO_x monitoring for the CAIR seasonal program begins in these jurisdictions plus six additional states affected for ozone under CAIR. The first compliance season for the CAIR seasonal program begins in FY 2009. Based on data reported to EPA, in 2006, there were approximately 2,580 affected and operating units in the 19 NBP states and D.C.

FY 2009 Activities and Performance Plan:

In FY 2009, through the Clean Air Allowance Trading Programs, EPA is projected to measure, quality assure, and track emissions for SO_2 and/or NO_x from Continuous Emissions Monitoring Systems (CEMs) or equivalent monitoring methods at approximately 4,600 electric utility units and 330 industrial units. In addition, the program will conduct audits and certify emissions monitors. Through the SO_2 Allowance Tracking System (ATS) and NO_x Allowance Tracking System (NATS), allowance transfers are recorded and reconciled against emissions for all affected sources to ensure compliance. The NATS is expanding into the CAIR seasonal and CAIR annual NO_x allowance tracking systems. The volume of allowances recorded, tracked, and reconciled against emissions beginning in FY 2009 is projected to be approximately four times the volume in the current NATS, or over 2.2 million allowances. Separate activities determine compliance for approximately 980 coal-fired utility boilers with the Acid Rain NO_x emission rate reduction program.

By FY 2009, the NO_x Budget Program (NBP) will have become the CAIR seasonal NO_x program and will include six additional states and approximately 800 additional units. EPA will assist all the states, both prior NBP and new states, with program implementation, especially activities related to allowance trading, emissions monitoring, and end-of-season reconciliation of emissions with allowances. Required NO_x monitoring for the CAIR seasonal program began in 2008, or earlier for states and sources interested in qualifying for early emissions reduction credits.

In 2003, OMB assessed the Acid Rain Program, through the PART process, and gave a rating of "moderately effective." Both the Academy of Sciences and OMB have commended EPA on Acid Rain's accountability program which relies on the Clean Air Status and Trends Network (CASTNET) for monitoring deposition, ambient sulfate and nitrate concentrations, and other air quality indicators. EPA is working to develop and implement an industry-oriented measure of program efficiency for PART that takes into consideration the full cost of the program by Spring 2008. The National Ambient Air Quality Standards Federal program, PARTed in 2005, received a rating of "adequate." EPA is working to implement improvements, within current statutory limitations, that address deficiencies in design and implementation, and identify and evaluate needed improvements that are beyond current statutory authority by December 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Tons of sulfur dioxide emissions from electric power generation sources	Data Avail 2008	7,500,000	8,000,000	8,000,000	Tons Reduced

Reducing emissions of SO_2 and NO_x continues to be a crucial component of EPA's strategy for cleaner air. Particulate matter can be formed from direct sources (such as diesel exhaust or smoke), but can also be formed through chemical reactions. Emissions of SO_2 and NO_x can be chemically transformed into sulfates and nitrates ("acid rain particulate"), which are very tiny particles that can be carried, by winds, hundreds of miles. These same small particles are also a main pollutant that impairs visibility across large areas of the country, particularly national parks that are known for their scenic views. Meeting EPA's national health-based air quality standards is an important step towards ensuring the air is safe to breathe. To meet the standards, EPA, states, tribes, and local governments work as partners to reduce emissions of SO_2 and NO_x. The Agency tracks percent change in average annual sulfur deposition and average annual nitrogen deposition. Targets have been established for every third year; the next planned report date is 2010.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$332.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$435.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will support assessment work designed to measure whether programs are achieving environmental benefits.
- (-0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f).

Federal Stationary Source Regulations
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$22,744.8***	***$26,504.0***	***$26,091.0***	***$26,787.0***	***$696.0***
Total Budget Authority / Obligations	$22,744.8	$26,504.0	$26,091.0	$26,787.0	$696.0
Total Workyears	108.4	105.8	105.8	105.8	0.0

Program Project Description:

Under the Clean Air Act (CAA), EPA is responsible for setting, reviewing, and revising the National Ambient Air Quality Standards (NAAQS) and for setting national emission standards for sources of criteria and air toxics. These national standards form the foundation for air quality management and air toxics programs implemented at the national, state, local and Tribal levels, and establish goals that protect public health and the environment. Please see http://www.epa.gov/oar/caa/ for more details.

The CAA requires EPA to set NAAQS for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. EPA has established NAAQS for six of the most pervasive air pollutants: particulate matter (PM), ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead.

This program includes activities directed toward reducing air emissions of toxic pollutants from stationary sources. People exposed to certain toxic air pollutants are at increased risk of cancer or other serious health effects. Specifically, this program relates to the development of control technology-based standards for major sources (i.e., Maximum Achievable Control Technology (MACT) standards) and area sources, the development of standards of performance and emissions guidelines for waste combustion sources, the assessment and regulation of residual risk remaining after implementation of the control technology-based standards, the periodic review and revision of the control technology-based standards, implementation of the Urban Air Toxics strategy, and associated national guidance and outreach information. This program also includes issuing, reviewing, and periodically revising, as necessary, new source performance standards for criteria and certain listed pollutants, standards to limit emissions of Volatile Organic Compounds (VOC) from consumer and commercial products, and establishment of Reasonably Available Control Technology (RACT) through issuance and periodic review and revision of control technique guidelines.

FY 2009 Activities and Performance Plan:

The following chart illustrates EPA's schedule to review criteria pollutants (listed in priority order) and the current status of the NAAQS reviews:

Proposal	Criteria Pollutant	Final
January 2011	Next PM	October 2011
June 2007	Ozone	March 2008
October 2011	CO	July 2012
March 2008	Lead	September 2008
May 2009 February 2010	Nitrogen Dioxide* Primary Secondary	December 2009 October 2010

Proposal	Criteria Pollutant	Final
July 2009 February 2010	Sulfur Dioxide* Primary Secondary	March 2010 October 2010

* The schedules for reviewing the SO_2 & NO_2 standards are under litigation and subject to change.

EPA will increasingly examine opportunities to meet multiple CAA requirements for stationary sources in more integrated ways, resulting in fewer individual standards in preference for rules that meet multiple CAA objectives for controlling both criteria and hazardous air pollutants in more consistent, cost-effective, and economically efficient ways. EPA will work with the regulated community to develop ways to optimize control of pollutant emissions through strategies that reach beyond classical source categories to allow for more flexible, multi-pollutant, and cost-effective sector-based approaches. In FY 2009, resources will be devoted to finalizing the area source standards currently under court-ordered deadlines, as well as updating several MACT standards recently vacated by the courts.

The NAAQS Federal program, PARTed in 2005, received a rating of "adequate." EPA is working to implement improvements, within current statutory limitations, that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2008	35	35	36	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2008	58	59	59	Percentage

- Performance targets for reduction of toxicity weighted emissions are also supported by work under the Federal Support for Air Toxics program project.

- Implementation of the MACT standards is expected to result in the reduction of over 1.7 million tons of hazardous air pollutants.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$360.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$336.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will assist in meeting regulatory and court-ordered deadlines.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f).

Federal Support for Air Quality Management
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$95,576.0***	***$90,490.0***	***$89,464.0***	***$95,538.0***	***$6,074.0***
Science & Technology	$9,104.1	$10,886.0	$12,118.0	$11,086.0	($1,032.0)
Total Budget Authority / Obligations	$104,680.1	$101,376.0	$101,582.0	$106,624.0	$5,042.0
Total Workyears	694.9	700.7	700.7	709.7	9.0

Program Project Description:

The Federal support program assists state, Tribal, and local air pollution control agencies in the development, implementation, and evaluation of programs to implement the National Ambient Air Quality Standards (NAAQS) and the visibility protection program. EPA develops Federal measures and Regional strategies that help to reduce emissions from stationary and mobile sources; however, states and tribes have the primary responsibility for developing clean air measures necessary to meet the NAAQS and protect visibility. EPA partners with states, tribes, and local governments to create a comprehensive compliance program to ensure that multi-source and multi-pollutant reduction targets and air quality improvement objectives are met and sustained.

For each of the six criteria pollutants, EPA tracks two kinds of air pollution trends: air pollutant concentrations based on actual measurements in the ambient (outside) air at selected monitoring sites throughout the country, and emissions based on engineering estimates or measurements of the total tons of pollutants released into the air each year. EPA works with state and local governments to ensure the technical integrity of the source controls in the State Implementation Plans (SIPs). EPA assists areas in identifying the most cost-effective control options available including consideration of multi-pollutant reduction and innovative strategies. The Federal support program includes working with other Federal agencies to ensure a coordinated approach, and working with the United Nations and other countries to address pollution sources outside U.S. borders that pose risks to public health and ecological welfare within the U.S. This program also supports the development of risk assessment methodologies for the criteria air pollutants.

FY 2009 Activities and Performance Plan:

Particulate Matter is the single greatest ground-level air pollution threat and is linked to tens of thousands of premature deaths per year. In addition, repeated exposure to ozone can cause acute respiratory problems and lead to permanent lung damage. Therefore, implementation of the PM and Ozone standards is one of the Agency's highest priorities. EPA will continue to devote resources to support these revised NAAQS by developing policies to address transition issues

between the pre-existing and new standards. EPA will designate areas as attaining or not attaining the 2006 PM $_{2.5}$ standards and work with states to develop information to designate areas for possible new ozone standards. EPA also will provide limited technical and policy assistance to states developing Regional haze implementation plans. EPA will continue to review and act on SIP submissions in accordance with the CAA.

EPA will continue to implement the recommendations of the National Research Council (NRC). This includes: (1) developing a more integrated multiple pollutant management framework that incorporates criteria and toxic air pollutants; (2) incorporating ecosystem impacts, community effects, and future air quality and climate interactions; and (3) assessing progress of air programs through an accountability framework. EPA will continue to evaluate and implement, as appropriate, a limited set of reform recommendations of the Clean Air Act Advisory Committee's Subcommittee on Air Quality Management, focusing on the longer-term improvements recommended in 2007. This includes working with selected state and local agencies to pilot comprehensive multi-pollutant air quality planning programs. Key elements of these programs are to create comprehensive plans that include not only multi-pollutant air quality planning, but also make connections to and integrate with local land use, energy and transportation planning. In addition, EPA will continue to review issues on reactivity of volatile organic compounds (VOC) and propose appropriate updates to the VOC control policy.

EPA, in concert with the Department of Justice, will continue to support litigation related to the Clean Air Interstate Rule (CAIR), and will implement the CAIR Federal Implementation Plan (FIP). These two actions will ensure that the Phase I CAIR reductions occur by FY 2009 and FY 2010, as required, to support attainment of the $PM_{2.5}$ and ozone NAAQS.

EPA will provide assistance to state, local and Tribal agencies in implementing national programs and assessing their effectiveness. EPA uses a broad suite of analytical tools such as source characterization analyses, emission factors and inventories, statistical analyses, source apportionment techniques, quality assurance protocols and audits, improved source testing and monitoring techniques, augmented cost/benefit tools to assess control strategies, including voluntary measures, and urban and Regional-scale numerical grid air quality models (http://www.epa.gov/ttn/). EPA will maintain these tools (integrated multiple pollutant emissions inventory and air quality modeling platforms) to provide the technical underpinnings for more efficient and comprehensive air quality management.

In addition, EPA will continue to implement the National Ambient Air Monitoring Strategy to maintain, where possible, multiple pollutant monitoring sites to support the development and evaluation of multiple pollutant air management strategies. EPA will continue development of emissions measurement methods for condensable PM $_{2.5}$ for cross-industry application to ensure accurate and consistent measurement methods can be employed in the NAAQS implementation program. EPA will continue work with the Centers for Disease Control and Prevention (CDC) on accountability as they work with public health agencies to assess more broadly the progress of air regulations on public health outcomes.

EPA also will continue to assist other Federal agencies and state and local governments in implementing the conformity regulations during this period. The regulations require Federal

agencies, taking actions in nonattainment and maintenance areas, to determine that the emissions caused by their actions will conform to the SIP.

EPA will continue to participate in global and continental air quality management efforts addressing transboundary air pollution. EPA will continue to participate in negotiations under international treaties (e.g., US-Canada, Convention on Long Range Transboundary Air Pollution, Stockholm Convention on Persistent Organic Pollutants (POPs)) and to lead and participate in partnerships (e.g., the Global Mercury Programme partnerships) to address fine particles, ozone, mercury, and POPs; assess trends and impact on US air quality using sophisticated models; and build capacity to reduce transboundary air pollution in key Regions and countries of the world (e.g., India, China, and Mexico).

EPA will continue to operate and maintain the automated Air Quality Subsystem (AQS), which houses the nation's air quality data and allows for data and technology exchange/transfer. EPA will modify the AQS, as necessary, to reflect new ambient monitoring regulations and to ensure that it complies with only the most critical programmatic needs and EPA's architecture and data standard requirements. The AQS Data Mart will continue to provide access to the scientific community and others to obtain air quality data via the internet (http://epa.gov/ttn/airs/airsaqs). EPA will continue the development of the new emissions inventory system (EIS) by completing the function that allows states to enter their emissions data and begin limited testing, tuning and training. The EIS will allow EPA and its stakeholders comprehensive national access to needed program information more efficiently than ever before.

EPA will continue to focus on the timely issuance of renewal permits and to respond to veto petitions under the Title V operating permits program. EPA also will continue to address monitoring issues in underlying Federal and state rules. EPA also will take appropriate action to more broadly improve the Title V program by implementing a limited set of recommendations from the Clean Air Act Advisory Committee's Task Force on Title V program performance (http://www.epa.gov/air/oaqps/permits/).

EPA also will support the expansion of energy permitting work in the Regions. Among other areas, EPA will perform monitoring support associated with permit issuance and NEPA evaluation.

EPA will continue its New Source Review (NSR) reform efforts by finalizing rules currently under development. EPA will continue to work with state and Tribal governments to implement revisions to the Prevention of Significant Deterioration requirements and NSR rules, including updates to delegation agreements (for delegated states) and review of implementation plan revisions (for SIP-approved states). EPA also will continue to review and respond to reconsideration requests and (working with DOJ) legal challenges related to NSR program revisions, and will take any actions necessary to respond to court decisions. EPA also will continue to work with industries on pollutant measurement issues affecting NSR applicability.

The NAAQS Federal program, PARTed in 2005, received a rating of "adequate." EPA will continue to implement improvements, within current statutory limitations, that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority by December 2008. The Air Quality Grants and

Permitting Program, also PARTed in 2005, received a rating of "ineffective." EPA has updated current grant allocation processes to ensure resources are properly targeted, and will continue to develop measures of permit program efficiency and make program adjustments to ensure targets are met by December 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.	Data Avail 2008	3	4	5	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	Data Avail 2008	6	8	10	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of major NSR permits issued within one year of receiving a complete permit application.	Data Avail 2008	75	78	78	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of new Title V operating permits issued within 18 months of receiving a complete permit application.	Data Avail 2008	87	91	95	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	Data Avail 2008	94	97	100	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	Data Avail 2008	0	-1.2	-2.4	Percentage

EPA, collaborating with the states, will continue implementing Federal measures and assisting with the development of clean air plans to move the remaining $PM_{2.5}$ nonattainment areas into attainment by 2015 and the remaining ozone nonattainment areas into attainment by the CAA-prescribed date, ranging from FY 2009 - FY 2024.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,867.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$407.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will assist in providing technical and benefits assessment support to the states, locals, and tribes to implement the NAAQS and visibility protection programs.

- (+$1,800.0 / +9.0 FTE) This increase supports the expansion of energy permitting work in the Regional offices to keep pace with the nation's burgeoning energy exploration and development. EPA will use the requested funds to: prepare permits and NEPA reviews; conduct modeling and analysis of emerging technologies (such as coal liquefaction and oil shale recovery); and perform monitoring support associated with permit issuance and NEPA evaluation.

Statutory Authority:

CAA Amendments of 1990 (42 U.S.C. 7401-7661f).

Federal Support for Air Toxics Program
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$25,081.8***	***$24,711.0***	***$24,390.0***	***$22,693.0***	***($1,697.0)***
Science & Technology	$1,804.1	$2,252.0	$2,220.0	$2,303.0	$83.0
Total Budget Authority / Obligations	$26,885.9	$26,963.0	$26,610.0	$24,996.0	($1,614.0)
Total Workyears	141.2	141.8	141.8	141.8	0.0

Program Project Description:

The Federal support program assists State, Tribal and local air pollution control agencies and communities with modeling, inventories, monitoring, assessments, strategy and program development and community-based toxics programs.
EPA also provides support for voluntary programs including those that reduce inhalation risk and those that reduce deposition to water bodies and ecosystems; international cooperation to reduce transboundary and intercontinental air toxic pollution; National Emissions Inventory (NEI) development and updates; Great Waters; the development of risk assessment methodologies for the toxic air pollutants; and Persistent Bioaccumulate Toxics (PBT) activities; and, training for air pollution professionals. In addition, it includes activities for implementation of Federal air toxics standards and the triennial National Air Toxics Assessments. Effective implementation of air toxics standards will lead to reduction of emissions of air toxic; which are known to cause increased risk of cancer or other serious health effects.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to maintain the 2002 National Emission Inventory and to accept National Inventory Files from States for use in the reengineered 2008 NEI. The NEI will be used by EPA, states, and others to analyze the public health risks from air toxics, and develop strategies to manage that risk and support multipollutant analysis covering both air toxics and NAAQS pollutants. EPA also will be ready to accept and perform data quality and analytical work in mid-2010. The completed 2008 National Emission Inventory System will be a better-automated, more accurate, multi-pollutant inventory integrating criteria pollutants and HAP data. For more information visit: (http://www.epa.gov/ttn/chief/net/index.html)

To aid the Agency in characterizing risk, EPA will continue to work with state and local agencies, via the National Air Monitoring Steering Committee, to implement the National Air Toxics Monitoring Network. The network has two main parts: the National Air Toxics Trends Sites (NATTS), and Local Scale Monitoring (LSM) projects. The NATTS, designed to capture the impacts of widespread pollutants, is comprised of 25 permanent monitoring sites with plans

to expand the network in FY08 and FY09 to 28-30 sites. The LSMs are comprised of scores of short-term monitoring projects, each designed to address specific local issues. In FY09, 12-16 additional community scale monitoring projects will be initiated. For more information on air toxics monitoring is available at: http://www.epa.gov/ttn/amtic/airtoxpg.htm)l.

In addition to meeting CAA requirements, EPA will build on its multi-pollutant and sector pilot efforts by constructing and organizing initiatives around industrial sectors. The focus of these efforts will be to address a sector's emissions comprehensively and prioritize regulatory efforts on the pollutants of greatest concern. EPA will look at all pollutants in an industrial sector and look for ways to take advantage of the co-benefits of pollution control. Reducing emissions of one pollutant often presents cost-effective opportunities to reduce emissions of additional air pollutants. Sector and multi-pollutant approaches can take many forms (e.g. cap and trade, opt-in, plant-wide programs) and will continue to evolve as solutions are developed and tailored to address the differing nature of the various sectors. EPA will continue to improve both ambient and source air toxics measurement/monitoring methods via these innovative approaches.

EPA 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 for air toxics. This will allow State, local and Tribal governments, industry, public interest groups, and local citizens to work together to determine if actions are needed, and if so, what should be done.

Based on recommendations from EPA's PBT Monitoring Steering Committee, ambient mercury models will be improved to support understanding of changes in ambient concentrations and deposition rates because of changes in mercury emission rates. The improvements made in FY 2009 and those improvements made in earlier years for both multi-scale and multimedia modeling will continue to be evaluated. The multi-scale monitoring will enable assessment of near-field potential for elevated concentrations associated with both major and minor point sources. Re-emittance of mercury through soil, vegetation and water is believed to be an important factor affecting the mercury cycle; however, it is currently poorly characterized in atmospheric models. We will continue to develop a true multimedia modeling framework that links air quality models with watershed/water surface models. Enhanced monitoring efforts will provide needed information for model intercomparison and validation studies.

EPA also anticipates a network of 10 atmospheric mercury monitoring stations using standardized procedures and a coordinated data management system will be operational in 2009, with partial EPA support and co-funding by partnering organizations. These sites will complement the existing Mercury Deposition Network, which measures wet-only mercury deposition. EPA anticipates continued support of site operation, coordination, quality assurance, and data management expenses in the out years.

EPA will continue its efforts under the Air-Water Interface Work Plan to address and prevent adverse effects of atmospheric deposition to waterbodies, including coastal waters. For more information visit: http://www.epa.gov/oar/oaqps/gr8water/. These efforts involve the development and support of multi-media approaches to reduce risk and achieve water quality

standards. Up-to-date information regarding multimedia work will be provided to state, local and Tribal agencies and other organizations.

The Air Toxics program, re-assessed by OMB in 2004 through the PART process, received a rating of "adequate." EPA is working on improving monitoring systems to fill data gaps and get a better assessment of actual population exposure to toxic air pollution.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2009	35	35	36	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2009	58	59	59	Percentage

Performance targets for reduction of toxicity weighted emissions also are supported by work under the Federal Stationary Source Regulations program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$628.0) This reflects increases for payroll and cost of living for existing FTE.

- (-$2,325.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and will delay the implementation of the new Emissions Inventory System and the 2008 National Emissions Inventory (NEI) and National Scale Air Toxics Assessment (NATA) databases.

Statutory Authority:

CAA (42 U.S.C. 7401-7661f).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$10,172.7***	***$10,186.0***	***$10,057.0***	***$10,533.0***	***$476.0***
Science & Technology	$2,126.1	$2,120.0	$2,087.0	$2,109.0	$22.0
Hazardous Substance Superfund	$1,960.9	$2,373.0	$2,342.0	$2,414.0	$72.0
Total Budget Authority / Obligations	$14,259.7	$14,679.0	$14,486.0	$15,056.0	$570.0
Total Workyears	89.2	88.6	88.6	88.6	0.0

Program Project Description:

The Radiation Protection Program includes activities that minimize public radiation exposure. EPA provides oversight of operations at the Waste Isolation Pilot Plant (WIPP) and is responsible for development of environmental standards applicable to Yucca Mountain. EPA also sets protective limits on radioactive air emissions and ensures that the Agency has appropriate methods to manage radioactive releases and exposures. EPA works with other Federal agencies, states, Tribes, and private sector entities to develop and use training, public information, and voluntary programs to reduce public exposure to radiation.[1] Other EPA approaches include radiation clean-up and waste management guidance, radiation pollution prevention, and guidance on radiation protection standards and practices to Federal agencies.

EPA also supports assessment of new scientific findings in order to conduct radiation risk assessments and develops the technical tools and the basis for generating radionuclide-specific risk coefficients. Risk managers use this information to assess health risks from radiation exposure and to determine appropriate levels for contaminated site clean-up. This information also is utilized by EPA to develop radiation protection and risk management policy, guidance, and rulemakings.

FY 2009 Activities and Performance Plan:

EPA will continue its oversight work to ensure that all radioactive waste shipped by the Department of Energy (DOE) to the Waste Isolation Pilot Plant (WIPP) is permanently and safely disposed of, consistent with EPA standards[2]. EPA will conduct inspections of waste generator facilities and evaluate DOE's compliance with applicable environmental laws and regulations every 5 years.

[1] Additional information at: http://www.epa.gov/radiation/assessment/index.html last accessed 7/25/2007.
[2] Additional information at: http://www.epa.gov/radiation/WIPP/ last accessed 7/25/2007.

EPA will continue protecting people and the environment from harmful and avoidable exposure to radiation by providing information about radiation and hazards from radioactive materials. EPA, in partnership with other Federal agencies, will continue to promote the management of radiation risks in a consistent and safe manner at water treatment facilities, and during cleanups at Superfund, DOE, Department of Defense (DOD), state, local and other Federal sites. EPA will continue to conduct risk assessments on radiation, including radon, and provide technical tools.

In FY 2009, EPA will begin to implement revisions to its cancer risk models and projections based on Biological Effects of Ionizing Radiation (BEIR) VII recommendations. In mid-FY 2008, EPA expects to receive a Science Advisory Board (SAB) consultation report on its draft report (submitted to the SAB in September 2006) which proposed changes in methods for estimating risks. Once EPA receives the SAB's report, it will prepare a report that presents revised methods for calculating radiogenic cancer risks which will again require formal review by the SAB. Also, during FY 2009, EPA will examine impacts the proposed changes might have on risk estimates for specific radionuclides as contained in Federal Guidance Report-13 and will begin to assess possible policy implications. EPA will continue to provide national guidance on the risks posed by radiation in the environment, including technical guidance for conducting and documenting risk assessments.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	40	43	46	53	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Population covered by Radiation Protection Program monitors per million dollars invested.	4,418,000	4,159,000	4,729,000	5,254,000	Dollars

EPA is on track through its ongoing work to accomplish its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure. The Office of Management and Budget (OMB) recently approved several outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The

measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets. The Radiation Program received a rating of "moderately effective."

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$237.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$239.0) This reflects the net change after restoring the FY 2008 Omnibus 1.56% rescission and increasing funding to support continued risk assessment of radionuclides.

Statutory Authority:

AEA of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; CAA Amendments of 1990; CERCLA as amended by the SARA of 1986; Energy Policy Act of 1992, P.L. 102-486; Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980; NWPA of 1982; PHSA as amended, 42 U.S.C 201 et seq.; SDWA; UMTRCA of 1978; WIPP Land Withdrawal Act.

Radiation: Response Preparedness
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Radiation

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$2,809.7***	***$2,928.0***	***$2,882.0***	***$2,941.0***	***$59.0***
Science & Technology	$3,375.6	$3,721.0	$3,679.0	$4,016.0	$337.0
Total Budget Authority / Obligations	$6,185.3	$6,649.0	$6,561.0	$6,957.0	$396.0
Total Workyears	39.1	42.3	42.3	42.3	0.0

Program Project Description:

EPA generates policy guidance and procedures for EPA radiological emergency response under the National Response Plan (NRP). EPA is a member of the Federal Radiological Preparedness Coordinating Committee (FRPCC), supports the federal Advisory Team for Environment, Food, and Health (the "A-Team") and also maintains its own Radiological Emergency Response Team (RERT). EPA responds to radiological emergencies, conducts national and regional radiological response planning and training and develops response plans for radiological incidents or accidents.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's RERT, a component of the Agency's emergency response structure, will maintain its preparedness for those radiological incidents for which EPA is the Coordinating Agency under the NRP and also will be prepared to fulfill its requirement under the Nuclear/Radiological Incident Annex to the NRP. EPA will design training and exercises to enhance the RERT's ability to fulfill EPA responsibilities as well as analyze them for improvements needed for overall radiation response preparedness.[3] Through personnel and asset training and exercises EPA will continue to enhance and maintain its state of readiness for radiological emergencies.

EPA will continue to coordinate with its interagency partners under the Federal Radiological Preparedness Coordinating Committee to revise Federal radiation emergency response plans, develop radiological emergency response protocols and standards. The Agency also will continue to develop guidance addressing lessons learned from incidents and exercises to ensure more effective coordination of EPA support with that of other Federal and state response agencies. EPA also will continue to develop and maintain Protective Action Guides (PAGs) for

[3] Additional information can be accessed at: http://www.epa.gov/radiation/rert/ last accessed 7/25/2007.

use by Federal, state, and local responders. EPA will provide training on the use of the PAGs to users through workshops and radiological emergency response exercises.

In addition, EPA will continue to participate in planning, and implementing international and Federal table-top and field exercises including radiological anti-terrorism activities, with the Nuclear Regulatory Commission (NRC), Department of Energy (DOE), Department of Defense (DOD) and Department of Homeland Security (DHS). EPA also will continue to train state, local, and Federal officials and provide technical support to federal and state radiation, emergency management, solid waste, and health programs that are responsible for radiological emergency response and for development of their own preparedness programs.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations.	80	83	85	90	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average time of availability of quality assured ambient radiation air monitoring data during an emergency.	1.3	1.3	1	.8	Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions.	20	21	35	50	Percentage

EPA expects to be on track through its ongoing work to accomplish its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure. The Office of Management and Budget (OMB) recently approved several outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets. The Radiation Program received a rating of "moderately effective."

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

(+$59.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

AEA of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; CAA Amendments of 1990; CERCLA, as amended by the SARA of 1986 (SARA); 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; PHSA, as amended, 42 U.S.C 201 et seq.; Robert T. Stafford Disaster Relief and EAA, as amended, 42 U.S.C 5121 et seq.; SDWA.

Stratospheric Ozone: Domestic Programs
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air; Protect the Ozone Layer

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$5,280.0***	***$4,489.0***	***$5,119.0***	***$4,696.0***	***($423.0)***
Total Budget Authority / Obligations	$5,280.0	$4,489.0	$5,119.0	$4,696.0	($423.0)
Total Workyears	25.7	23.8	23.8	23.8	0.0

Program Project Description:

The stratospheric ozone layer protects life on earth by preventing harmful ultra-violet (UV) radiation from reaching the earth's surface. Scientific evidence amassed over the past 30 years has shown that Ozone Depleting Substances (ODS) used around the world are destroying the stratospheric ozone layer.[4] Increased levels of UV radiation due to ozone depletion are expected to raise the incidence of skin cancer, cataracts, and other illnesses.[5] Skin cancer is the most common type of cancer and accounts for more than 50 percent of all cancers in adults.[6] Increased UV levels have also been associated with other human and non-human risks, including immune suppression and effects on aquatic ecosystems and agricultural crops.

EPA estimates that in the United States alone, the worldwide phaseout of ODS will avoid 299 million cases of non-fatal skin cancers and 27.5 million cases of cataracts between 1990 and 2165.[7] This estimate is based on the assumption that international ODS phaseout targets will be achieved, allowing the ozone layer to begin recovery by the middle of this century. According to current atmospheric research, the ozone layer is not expected to recover until the mid-21st century at the earliest, due to the very long lifetimes of ODS.[8]

EPA's Domestic Stratospheric Ozone Protection Program will implement the provisions of the Clean Air Act Amendments of 1990 (the Act) and the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), which will lead to the reduction and control of ODS in the U.S. and lower health risks to the American public due to exposure to UV radiation. Since ODS and many of their substitutes are also potent greenhouse gases, reduction and appropriate control of these materials also will provide the important co-benefit of reduced emissions of greenhouse gases. The Act provides for a phaseout of production and consumption

[4] World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2006. Geneva, Switzerland. 2007.
[5] Fahey, D.W. (Lead Author), World Health Organization, et. al. "Twenty Questions and Answers About the Ozone Layer: 2006 Update, Scientific Assessment of Ozone Depletion, World Meteorological Organization, March 2007.
[6] American Cancer Society. "What are the Key Statistics for Melanoma?" Accessed July 18, 2007. Available on the Internet at http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_are_the_key_statistics_for_melanoma_50.asp?sitearea=
[7] U.S. Environmental Protection Agency (EPA). The Benefits and Costs of the Clean Air Act 1990-2010: EPA Report to Congress. EPA: Washington, DC. November 1999.
[8] WMO, 2007.

of ODS and requires controls on various products containing ODS or their substitutes. As a signatory to the Montreal Protocol, the U.S. also is committed to regulating and enforcing its terms domestically.

FY 2009 Activities and Performance Plan:

In carrying out the requirements of the Act and the Montreal Protocol in FY 2009, EPA will continue to implement the domestic rulemaking agenda for reduction and control of ODS. EPA will provide compliance assistance and enforce rules controlling their production, import, and emission.

In FY 2009, EPA will focus its work to both assure that currently required caps on production and import are met, as well as on approving the use of alternatives to ODS to assist the market's transition to safer, non-ozone depleting alternatives. EPA also will assure that management of ODS and their substitutes meets Clean Air Act requirements by limiting emissions to the atmosphere.

Pollution prevention is an important element in achieving the ozone protection objective. The National Emission Reduction Program will require recovery and recycling or reclamation of ODSs and their substitutes, primarily in the air-conditioning and refrigeration sectors. Also, under the Significant New Alternatives Policy (SNAP), EPA will review newly developed alternatives to ODS and, if necessary, will restrict use of alternatives for a given application that are more harmful to human health and the environment on an overall basis. In addition, EPA will work with Federal and international agencies to curb illegal imports of ODS and ensure a smooth transition to non-ozone depleting alternatives in various sectors.

In 2004, OMB assessed the Stratospheric Ozone program through the PART process, and rated it as "adequate." The assessment found that the program has a clear purpose, addresses a specific need, is free of major flaws, and is effectively targeted. Investments in this program will help to assure that it continues to meet existing performance goals and continues work on performance measures and targets to track intermediate outcomes by measuring "thickness" of the ozone layer in the atmosphere.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Remaining US Consumption of HCFCs in tons of Ozone Depleting Potential (ODP).	Data Avail 2009	<9,900	<9,900	<9,900	ODP MTs

- Annual performance goals are set to meet Clean Air Act requirements for the quantities and timing of phasing out the production and import of ozone depleting substances. The basis of comparison for assessing the program is the domestic consumption cap of class II HCFCs as set by the Parties to the Montreal Protocol. Each ozone depleting substance is weighted based on the damage it does to stratospheric ozone -- this is the 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 chlorofluorocarbons (CFCs) in 1989 plus the ODP-weighted level of hydrochlorofluorocarbons (HCFCs) in 1989. Consumption equals production plus import minus export.

- The next incremental reduction in production and import of class II HCFCs that the U.S. is required to meet is no more than 5334 MT starting in 2010. Further incremental reductions are required through 2020, until all ODS production and import is phased out except for exempted amounts.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$508.0) This reduction reflects the net change after restoring the FY 2008 Omnibus 1.56% rescission and eliminating funding for the SunWise program.

- (+$85.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

CAA Amendments of 1990, Title I, Parts A and D (42U.S.C. 7401-7434, 7501-7515), Title V (42 U.S.C. 7661-7661 f), and Title VI (42 U.S.C. 7671-7671q); The Montreal Protocol on Substances that Deplete the Ozone Layer.

Stratospheric Ozone: Multilateral Fund
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Protect the Ozone Layer

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$11,315.0***	***$9,865.0***	***$9,711.0***	***$9,865.0***	***$154.0***
Total Budget Authority / Obligations	$11,315.0	$9,865.0	$9,711.0	$9,865.0	$154.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The stratospheric ozone layer protects life on earth by preventing harmful ultra-violet (UV) radiation from reaching the earth's surface. Scientific evidence amassed over the past 30 years has shown that Ozone Depleting Substances (ODSs) used around the world are destroying the stratospheric ozone layer.[9] Increased levels of UV radiation due to ozone depletion are expected to raise the incidence of skin cancer, cataracts, and other illnesses.[10] Skin cancer is the most common type of cancer and accounts for more than 50 percent of all cancers in adults.[11] Increased UV levels also have been associated with other human and non-human risks, including immune suppression and effects on aquatic ecosystems and agricultural crops.

Under the *Montreal Protocol on Substances that Deplete the Ozone Layer*, the U.S. and other developed countries contribute to the Multilateral Fund to support projects and activities that eliminate the production and use of ozone depleting substances (ODS) in developing countries. Currently, the United States and 189 other countries are parties to the Montreal Protocol. The United States has affirmed its commitment to this international treaty and to demonstrating world leadership by phasing out domestic production of ODS, as well as helping other countries find suitable alternatives.

EPA estimates that in the U.S. alone, the worldwide phaseout of ODS will avoid 299 million cases of non-fatal skin cancers and 27.5 million cases of cataracts between 1990 and 2165.[12] This estimate is based on the assumption that international ODS phaseout targets will be achieved, allowing the ozone layer to begin recovery by the middle of this century. According to current atmospheric research, the ozone layer is not expected to recover until the mid-21st century at the earliest, due to the very long atmospheric lifetimes of ODS.[13]

[9] World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2006. Geneva, Switzerland. 2007.
[10] Fahey, D.W. (Lead Author), World Health Organization, et. al. "Twenty Questions and Answers About the Ozone Layer: 2006 Update, Scientific Assessment of Ozone Depletion, World Meteorological Organization, March 2007.
[11] American Cancer Society. "What are the Key Statistics for Melanoma?" Accessed July 18, 2007. Available on the Internet at http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_are_the_key_statistics_for_melanoma_50.asp?sitearea=..
[12] U.S. Environmental Protection Agency (EPA). The Benefits and Costs of the Clean Air Act 1990-2010: EPA Report to Congress. EPA: Washington, DC. November 1999.
[13] WMO, 2007.

FY 2009 Activities and Performance Plan:

EPA's contributions to the Multilateral Fund in FY 2009 will help continue to support cost-effective projects that are designed to build capacity and eliminate ODS production and consumption in over 60 developing countries. Today, the Multilateral Fund continues to support over 5,150 activities in 139 countries, and when fully implemented, will prevent annual emissions of more than 223,729 metric tons of ODS. Over 80% of already agreed upon project activities have been implemented to date, with remaining work in these already agreed upon projects expected to be fully implemented by 2010. Additional projects will be considered and approved in accordance with Multilateral Fund guidelines to address the remaining 9,155 metric tonnes of ODS (weighted by their potential to damage the ozone layer) for which there are not yet projects to assist in meeting developing country obligations under the Montreal Protocol.

In 2004, OMB assessed the Stratospheric Ozone program through the PART process, and rated it as "adequate." The assessment found that the program has a clear purpose, addresses a specific need, is free of major flaws, and is effectively targeted. The assessment included a specific recommendation for continued support of the Multilateral Fund for the Implementation of the Montreal Protocol.

Performance Targets:

- Performance targets for ozone layer protection are also supported by work under Stratospheric Ozone: Domestic Programs.

- Annual performance goals are set to meet Clean Air Act requirements for the quantities and timing of phasing out the production and import of ODS. The base of comparison for assessing the program is the domestic consumption cap of class II hydrochlorofluorocarbons (HCFCs), as set by the Parties to the Montreal Protocol. Each ODS is weighted based on the damage it does to the stratospheric ozone -- this is the 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.

- The next incremental reduction in production and import of class II HCFCs that the U.S. is required to meet is no more than 5334 MT starting in 2010. Further incremental reductions are required through 2020, until all ODS production and import is phased out except for exempted amounts.

- Long-term performance goals are set to reflect environmental response to actions to reduce consumption of ODS. Meeting the long-term performance goal of reduced levels of effective equivalent stratospheric chlorine requires successful action not only by the U.S. and other developed countries, but by all developing nations worldwide.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$154.0) This increase reflects restoration of the 1.56% rescission mandated by the FY 2008 Omnibus budget. Support for the Multilateral Fund remains stable between the FY 2008 President's Budget and the FY 2009 President's Budget.

Statutory Authority:

CAA Amendments of 1990, Title 1, Parts A and D (42 U.S.C. 7401-7434, 7501-7515), 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.

Program Area: Brownfields

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$25,838.4***	***$23,450.0***	***$23,665.0***	***$22,732.0***	***($933.0)***
Total Budget Authority / Obligations	$25,838.4	$23,450.0	$23,665.0	$22,732.0	($933.0)
Total Workyears	115.7	127.9	127.9	125.9	-2.0

Program Project Description:

The Brownfields program is designed to help states, tribes, local communities and other stakeholders in economic redevelopment to work together to assess, safely cleanup, and reuse brownfields. Revitalizing these once productive properties helps communities by removing blight, satisfying the growing demand for land, helping limit urban sprawl, fostering ecologic habitat enhancements, enabling economic development, and maintaining or improving quality of life. EPA's Brownfields program funds research efforts, clarifies liability issues, enters into Federal, state, and local partnerships, conducts outreach activities, and creates related job training and workforce development programs. EPA's work is focused on removing barriers and creating incentives for brownfield redevelopment. The program provides financial assistance for: 1) hazardous substances training for organizations representing the interests of states and Tribal co-implementers of the Brownfields law; and 2) Tribal technical outreach support to address environmental justice issues and support Brownfields research.

The Smart Growth program works with stakeholders to create an improved economic and institutional climate for Brownfields redevelopment. The Smart Growth program removes barriers and creates incentives by changing development standards that affect the viability of Brownfields redevelopment; and creating cross-cutting solutions that improve the economic, regulatory and institutional climate for Brownfields redevelopment.

FY 2009 Activities and Performance Plan:

In addition to supporting the operations and management of the Brownfields program, funds requested will provide financial assistance for training on hazardous waste to organizations representing the interests of state and Tribal co-implementers of the Brownfields law: the Small Business Liability Relief and Brownfields Revitalization Act (SBLRBRA). The program also offers outreach support for environmental justice issues involving Tribal and native Alaskan villages or other disadvantaged communities that need to address perceived or real hazardous substance contamination at sites in their neighborhood or community. EPA also will provide technical assistance to communities that were awarded funding to combine smart growth policies with Brownfields redevelopment. EPA also will conduct further research on incentives for

cleanup that encourage Brownfields redevelopment, pilot additional techniques to accomplish redevelopment within communities, identify new policy and research needs, better track and report on brownfields properties and create examples and best practices that can be copied in other communities.

The Smart Growth program will address critical issues for Brownfield redevelopment including land assembly, development permitting issues, financing, parking and street standards. The Smart Growth Program will also look at accountability to uniform systems of information for land use controls, and other factors that influence the economic viability of Brownfields redevelopment.

Performance Targets:

The Brownfields EPM program contributes to the overall Brownfields program goal and measures. The Brownfields Projects program contributes to the achievement of all performance measures and the Brownfields Categorical Grant program contributes to the achievement of the "properties assessed" measure. The Brownfields EPM program also contributes to EPA efforts to assess and clean up brownfields, as described in EPA's FY 2006-2011 Strategic Plan.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$388.0) This reflects an increase in payroll and cost of living for existing FTE.

- (-$527.0) The change reflects a decrease in funding for the Smart Growth Program. The Agency is not maintaining this funding amount for the Smart Growth Program which was directed by Congress in FY 2008.

- (-$794.0) This change reflects the net effect of the restoration of the 1.56% rescission to all program projects combined with technical changes such as realignment of IT, travel or other support programs.

- (-2.0 FTE) This decrease reflects a reduction in the Brownfields program staff. These resources have supported efforts to resolve liability for cleanup and facilitate cleanup, redevelopment, and reuse of brownfields and to respond to liability issues concerning the Brownfields grant program at both the headquarters and Regional level.

Statutory Authority:

CERCLA as amended by SBLRBRA (Public Law 107-118); RCRA, Section 8001; GMRA (1990); SWDA; FFGCAA.

Program Area: Climate Protection Program

Climate Protection Program

Program Area: Climate Protection Program
Goal: Clean Air and Global Climate Change
Objective(s): Reduce Greenhouse Gas Intensity

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$91,252.1***	***$87,927.0***	***$90,374.0***	***$87,008.0***	***($3,366.0)***
Science & Technology	$14,624.1	$13,104.0	$18,331.0	$11,402.0	($6,929.0)
Total Budget Authority / Obligations	$105,876.2	$101,031.0	$108,705.0	$98,410.0	($10,295.0)
Total Workyears	222.7	212.5	212.5	213.0	0.5

Program Project Description:

The core of EPA's climate change efforts are innovative, voluntary public-private partnership programs designed to capitalize on the cost-effective opportunities that consumers, businesses, and organizations have to invest in greenhouse-gas reducing technologies, policies, and practices. These investments in energy efficiency and clean energy avoid greenhouse gas emissions from power plants and mobile sources.

EPA manages a number of efforts, such as the ENERGY STAR program, SmartWay program, clean energy partnerships, and transportation efficiency programs, all of which remove barriers in the marketplace in order to deploy cost-effective technologies faster. These programs support and augment the Agency's regulatory program designed to reduce emissions. 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, services, and transportation choices; and the need for additional incentives for manufacturers to invest in efficiency research and development. EPA works with the Department of Energy on the ENERGY STAR program; DOE manages the specification process for approximately 6 product categories and EPA manages the specification process for more than 50 product categories, the new and existing homes programs, and the commercial and industrial programs. (For more information visit: www.epa.gov/energystar.html and www.epa.gov/smartway)

EPA also manages the continued implementation of the Methane to Markets Partnership – a U.S.-led international initiative that promotes cost-effective, near-term methane recovery and use as a clean energy source. The Partnership has the potential to deliver, by 2015, annual reductions in methane emissions of up to 500 billion cubic feet (Bcf) of natural gas. Methane to Markets builds on the success of EPA's domestic methane voluntary programs by creating an international forum that will achieve its goals through collaboration among developing countries, developed countries, and countries with economies in transition- together with strong participation from the private sector, development banks, and other governmental and non-governmental organizations. (For more information visit: www.epa.gov/methanetomarkets/)

EPA's Climate Protection Program has achieved real reductions of carbon dioxide (CO_2) and other greenhouse gases such as methane and perfluorocarbons (PFCs). EPA's climate change programs promote energy efficiency and the development of clean and renewable sources of energy. Since the investments made by EPA partners as a result of EPA programs often have lifetimes of ten years or more, actions taken today will continue to deliver environmental and economic benefits for many years to come. For every dollar spent by EPA on its climate change partnership programs, EPA estimates that the programs have reduced greenhouse gas emissions by up to 1.0 metric ton of carbon equivalent (3.67 tons of CO_2) and delivered more than $75 in energy bill savings.[14] This is based upon cumulative reductions since 1995.

EPA's carbon removal program evaluates the risks of carbon sequestration to human health and the environment. The Agency also is designing an inventory and accounting methodology for carbon sequestration and is initiating a rulemaking to ensure timely and effective permitting of commercial-scale sequestration projects.

EPA's SmartWay Partnership Program works with transportation technology and freight industry partners (shipper, carriers, etc.) to overcome the lack of reliable information and financing for cleaner more fuel efficient transportation technology. SmartWay is on track to reduce between 9 - 18 million metric tons of carbon equivalent (mmtce) emissions and up to 200,000 tons of nitrogen oxide (NO_x) emissions per year which was its established goal for 2012. At the same time, the initiative will result in fuel savings of up to 150 million barrels of oil annually.

EPA's international activities lead to greater information and technical capacity available for developing and industrialized countries to implement emissions reductions policies and climate protection programs. Most recently, the United States and EPA have partnered with Australia, China, India, Japan, Candada and South Korea to form the Asia-Pacific Partnership on Clean Development and Climate Change. This partnership focuses on voluntary practical measures taken by these six countries in the Asia-Pacific region to create new investment opportunities, build local capacity, and remove barriers to the introduction of clean, more efficient technologies. This partnership also helps each country meet nationally designed strategies for improving energy security, reducing pollution, and addressing the long-term challenge of climate change.

FY 2009 Activities and Performance Plan:

EPA will continue to implement its government/industry partnership efforts to achieve greenhouse gas reductions and contribute to the President's goal to reduce greenhouse gas intensity by 18 percent in 2012. In FY 2009, EPA's climate change programs are projected to:

- Reduce other forms of pollution, including air pollutants such as nitrogen oxides (NO_x), particulate matter, and mercury by accelerating the adoption of energy efficient products and practices and increasing the supply of clean electricity generation sources and renewable fuels.

[14] Climate Protection Partnerships Division, U.S. Environmental Protection Agency. 2005 http://www.energystar.gov/ia/news/downloads/annual_report20005.pdf

- Continue the ENERGY STAR program across the residential, commercial, and industrial sectors, including:

    - Adding new ENERGY STAR qualified product categories and revising specifications for existing product categories;
    - Expanding the ENERGY STAR residential programs to new markets around the country;
    - Supporting more partners in the commercial and industrial sectors in the pursuit of strategic energy management through ENERGY STAR.

  The FY 2009 Budget Request for the ENERGY STAR program totals $44.2 million.

- Continue the SmartWay Transport Partnership to increase energy efficiency and lower emissions of freight transportation through verification, promotion and low cost financing of advanced technologies including diesel engine retrofits, anti-idling technologies, lower rolling resistant tires, improved aerodynamic truck designs, and improved freight logistics. The FY 2009 Budget Request for the Smartway Transport Partnership program totals $2.0 million.

- Promote renewable fuel blends with the greatest environmental benefit in order to maximize the potential of these fuels to reduce greenhouse gas intensity and improve air quality. In FY 2007, EPA launched the SmartWay Grow & Go program to promote the environmental benefits of renewable fuels. This program creates a renewable fuel component for EPA's existing SmartWay Transport Partnership. Currently, there are over 600 partners representing the ground freight industry in the SmartWay Transport Partnership. EPA's goal is for 25 percent of our SmartWay partners to commit to use renewable fuels, and by 2020 to have 50 percent of our partners commit to use renewable fuels. On August 24, 2007, SmartWay announced the first 48 Grow & Go partners (http://www.epa.gov/smartway/growandgo/gats2007.htm).

- Continue the extension of the Methane-to-Markets Partnership by assessing the feasibility of methane recovery and use projects at landfills, agricultural waste operations, coal mines, and natural gas and oil facilities and by identifying and addressing institutional, legal, regulatory and other barriers to project development in partner countries, such as Argentina, Brazil, China, Colombia, Ecuador, India, Mexico, Nigeria, Poland, Republic of Korea, Russia, Ukraine, and Vietnam with assistance from the private sector and partners from countries such as Australia, Canada, Germany, Italy, Japan, the United Kingdom, and the European Commission. The FY 2009 Budget Request for the Methane to Markets program totals $4.5 million.

- Continue policy and technical assistance to developing countries and countries with economies-in-transition to reduce emissions of greenhouse gases through cost-effective measures and assist in the fulfillment of the U.S. obligations under the U.N. Framework Convention on Climate Change (UNFCCC) to facilitate technology transfer to developing countries.

- Produce measurable international greenhouse gas emission reductions through clean industrialization partnerships with key developing countries, including China, Mexico, India, and South Korea.

- Continue to actively support the government-wide Asia-Pacific Partnership on Clean Development and Climate Change to assist the Asia-Pacific region in developing country-specific strategies to improve energy security and reduce pollution. EPA will also work with the Asia-Pacific region to develop and deploy new and emerging technologies and tailor programs, such as methane capture and use, to meet the specific conditions of each area. The FY 2009 Budget Request for the Asia-Pacific Partnership totals $5.0 million.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Tons of greenhouse gas emissions (mmtce) prevented per societal dollar in the building sector.		No Target Established	No Target Estab-lished	No Target Estab-lished	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Tons of greenhouse gas emissions (mmtce) prevented per societal dollar in the industry sector.		No Target Established	No Target Estab-lished	No Target Estab-lished	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	Data Avail 2008	29.4	32.4	35.5	MMTCE

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	Data Avail 2008	62.6	67.7	72.9	MMCTE

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	Data Avail 2008	0.9	1.5	2.6	MMTCE

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Tons of greenhouse gas emissions (mmtce) prevented per societal dollar in the transportation sector.		No Target Estab-lished	No Target Estab-lished	No Target Estab-lished	Dollars

OMB assessed the Climate Change Program in 2004 through the PART process, and gave it a rating of "adequate." There are over 20 climate change programs which work with the private sector to cost effectively reduce greenhouse gas emissions and facilitate energy efficiency improvements. Each sector (buildings, industry and transportation) has performance and efficiency measures to track the amount of greenhouse gas emissions that are reduced as a result of the program's efforts.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$636.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$5,000.0) This funding will support the Asia-Pacific Partnership. Funding for the work

was reduced in the FY 2008 Omnibus. This partnership focuses on voluntary practical measures taken by Australia, China, India, Japan, Canada and South Korea to accelerate clean development in the Asia-Pacific region to create new investment opportunities, build local capacity, and remove barriers to the introduction of clean, more efficient technologies. EPA works with these nations to develop and deploy innovative technologies that are cleaner and more efficient.

- (-$250.0) This reduces congressionally directed funding provided in the FY 2008 Omnibus for the Agency to modify existing programs to accommodate quality assurance and quality control for emissions submitted via and regulated by the established northeastern Regional Greenhouse Gas Initiative (RGGI). All priority activities in this program can be funded within base resources.

- (-$3,445.0) This reduces congressionally directed funding from the FY 2008 Omnibus for the Greenhouse Gas Registry. EPA is reviewing available data to maximize efficiency and reduce potential overlaps while exploring options for integration.

- (-$4,015.0) This total reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission and reduces congressionally directed funding provided in the FY 2008 Omnibus for the Energy Star program. All priority activities in this program can be funded within base resources.

- (-$1292.0) This eliminates the Industrial Carbon outreach program to industry. Priority funding for outreach to industry on reduction of greenhouse gases is currently provided by Energy Star, Heat and Power Partnerships, Climate Leaders, Green Power Partnerships, Methane to Markets and other voluntary programs.

- (+0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align, resources, skills and Agency priorities.

Statutory Authority:

CAA Amendments, 42 U.S.C. 7401 et seq. – Sections 102, 103, 104 and 108; PPA, 42 U.S.C. 13101 et seq. – Sections 6602, 6603, 6604 and 6605; NEPA, 42 U.S.C. 4321 et seq. – Section 102; GCPA, 15 U.S.C. 2901 – Section 1103; FTTA, 15 U.S.C. – Section 3701a; CWA, 33 U.S.C. 1251 et seq. – Section 104; SWDA, 42 U.S.C. 6901 et seq.- Section 8001; EPA, 42 U.S.C. 16104 et seq.

Program Area: Compliance

Compliance Assistance and Centers
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$28,226.9***	***$29,547.0***	***$27,725.0***	***$26,435.0***	***($1,290.0)***
Leaking Underground Storage Tanks	$644.1	$688.0	$709.0	$753.0	$44.0
Oil Spill Response	$267.9	$291.0	$286.0	$303.0	$17.0
Hazardous Substance Superfund	$11.1	$22.0	$22.0	$22.0	$0.0
Total Budget Authority / Obligations	$29,150.0	$30,548.0	$28,742.0	$27,513.0	($1,229.0)
Total Workyears	205.7	208.4	203.4	198.4	-5.0

Program Project Description:

EPA uses four distinct but integrated tools to maximize compliance with the nation's environmental laws. This includes: compliance assistance (i.e., providing information to regulated entities about how to comply with often complex regulations); compliance incentives (i.e., policies to motivate regulated facilities/companies to identify, disclose, and correct violations); compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance data); and, civil and criminal enforcement (i.e., administrative and judicial enforcement actions). These tools are used in combinations appropriate to address specific noncompliance patterns and environmental risks.

EPA's Compliance Assistance program includes a range of activities and tools designed to improve compliance with environmental laws. Regulated entities, Federal agencies, and the public benefit from easy access to tools that help them understand these laws and find efficient, cost-effective means for putting them into practice.

To achieve these goals, the Compliance Assistance and Centers (CAC) program provides information, training, and technical assistance to the regulated community to increase its understanding of statutory and regulatory environmental requirements, thereby gaining improvements in compliance and reducing risks to human health and the environment. The program also provides tools such as plain-language guides, web-based compliance assistance centers, training, and assistance to other compliance assistance providers. Activities are measured and reported using the Integrated Compliance Information System (ICIS).[15]

[15]For more information, refer to: www.epa.gov/compliance/assistance/index.html, and www.assistancecenters.net.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will provide limited general compliance assistance to the regulated community, Federal agencies and tribes, and integrate assistance into its enforcement and compliance assurance efforts. Limited assistance activities will be provided to support the Enforcement and Compliance Assistance program's National Priorities.

In FY 2009, EPA will reduce direct assistance to the operation of the 17 web-based Compliance Assistance Centers. The Agency encourages efforts to ensure that the current web-content remains accurate. EPA will strengthen efforts to encourage the Centers to secure external funding to support continued operations, and to continue their ability to update Centers with new information, and to retain the interactive features often used by small businesses and local governments seeking assistance.

The Federal Facility Enforcement program will provide limited technical guidance to other Federal agencies on compliance with applicable Executive Orders and environmental laws. In FY 2009, EPA will also continue working with other Federal agencies to ensure continued support of the Federal Facilities Stewardship and Compliance Assistance Center (www.fedcenter.gov). The Agency also will carry out the actions outlined in the Energy Policy Act of 2005 by providing compliance assistance to owners and operators of Underground Storage Tanks (UST).

In FY 2009, EPA will continue refining data elements to ensure accurate reporting into the ICIS, and build the Agency's capacity to measure compliance assistance outcomes.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

EPA measures the environmental results of our compliance assistance program by tracking the percentage of regulated entities that report improvements in environmental management practices and pollutant reductions resulting from direct EPA compliance assistance. EPA's Compliance Assistance program achieves pollutant reductions, improves regulated entities' environmental management practices, and increases regulated entities' understanding of environmental requirements, through direct compliance assistance provided by EPA personnel and through web-based Compliance Assistance Centers. Due to budget reductions performance results for FY 2009 are expected to decline.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$104.0) This increase is the net effect of increases for payroll and cost of living for existing FTE.

- (-$1,619.0 / -5.0 FTE) This sustains a congressional decrease for compliance assistance centers in the FY 2008 Omnibus.

- (+$225.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to several technical changes such as realignment of IT, travel and other support costs across programs

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; CERCLA; NAAEC; LPA-US/MX-BR; EPAct.

Compliance Incentives
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$9,448.8***	***$9,786.0***	***$10,618.0***	***$10,263.0***	***($355.0)***
Hazardous Substance Superfund	$139.4	$144.0	$159.0	$146.0	($13.0)
Total Budget Authority / Obligations	$9,588.2	$9,930.0	$10,777.0	$10,409.0	($368.0)
Total Workyears	66.2	74.6	74.6	71.1	-3.5

Program Project Description:

EPA uses four distinct but integrated tools to maximize compliance with the nation's environmental laws. This includes: compliance assistance (i.e., providing information to regulated entities about how to comply with often complex regulations); compliance incentives (i.e., policies to motivate regulated facilities/companies to identify, disclose, and correct violations); compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance data); and, civil and criminal enforcement (i.e., administrative and judicial enforcement actions). These tools are used in combinations appropriate to address specific noncompliance patterns and environmental risks.

EPA's Compliance Incentives program encourages regulated entities to monitor and quickly correct environmental violations, reduce pollution, and make improvements in regulated entities' environmental management practices. In addition, EPA uses a variety of approaches to encourage entities to self-disclose environmental violations under various environmental statutes. EPA's Audit Policy encourages corporate audits of environmental compliance and subsequent correction of self-discovered violations, providing a uniform enforcement response toward disclosures of violations. Under the Audit Policy, when companies voluntarily discover and promptly correct environmental violations, EPA may waive or substantially reduce civil penalties.[16]

FY 2009 Activities and Performance Plan:

The Agency's Enforcement program will continue to implement the Audit/Self-Policing (Audit), Small Business Compliance, and Small Local Governments policies as core elements of the Enforcement and Compliance Assurance Program. Since FY 2001, more than 5,000 facilities and more than 2,000 companies resolved violations under EPA's Voluntary Disclosure Policies. In FY 2009, the Agency will continue to use the Audit Policy through outreach to industries.

[16] For more information refer to: www.epa.gov/compliance/incentives/programs/index.html.

Examples of EPA's sector-specific efforts include colleges and universities and healthcare facilities. EPA actively encourages disclosures at multiple facilities owned by the same regulated entity, because such disclosures allow each entity to review their operations holistically, which more effectively benefits the environment.

The Agency is exploring ways to encourage audits and to increase disclosure and settlement of violations that, once corrected, will yield significant pollutant reductions and environmental benefits. The Agency is considering how best to encourage new owners of facilities or businesses to use the Audit Policy and whether to develop a pilot program that would be implemented beginning in FY 2009. EPA will continue development and implementation of a system to disclose violations through an EPA Web site and streamlining the process for resolving routine Audit Policy disclosures of recordkeeping and reporting violations.

In FY 2009, the Compliance Incentives Program will continue to promote Environmental Management Systems (EMSs). EMSs provide organizations with an approach to minimizing environmental impacts – regulated and unregulated – by integrating environmental concerns into business decisions and practices. EPA will continue to implement the National Environmental Performance Track program, which is a program that recognizes and motivates top-performing facilities that consistently meet their legal requirements, have implemented EMS, and made tangible improvements to their environmental performance.

In FY 2009, the Agency will support and encourage states' efforts to adopt the innovative Environmental Results Program (ERP). ERP consists of four linked tools – compliance assistance, self-evaluation and certification, inspections, and performance measurement – that work together to hold facility owners and operators accountable for their environmental obligations. In Massachusetts, where ERP began, the program improved performance for small businesses and also resulted in savings for businesses, while allowing the state and EPA to focus resources on higher priority environmental problems.

EPA tracks compliance incentive environmental results in the Integrated Compliance Information System (ICIS) to enable the Agency to make strategic decisions for the best utilization of resources and tools, and to respond to increasing demands for compliance and environmental information. EPA will continue to make multi-media compliance incentives results information available to the public through the Enforcement and Compliance History On-line (ECHO) internet website during FY 2009. This site provides communities with compliance status and averages 75,000 queries per month.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance Program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollutants estimated to be reduced, treated, or eliminated, as a result of audit agreements.	1.2	0.4	0.4	0.4	Million pounds

One of the key Civil Enforcement PART program measures, pounds of pollutants reduced through audit agreements, looks at the overall reduction in pollution as a result of EPA Compliance Incentive programs. The Agency is exploring methodologies to strengthen this measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Although the estimated pollution reductions resulting from enforcement actions taken by EPA have grown over the past five years, these pollutant reductions are projections based on the settlement agreements entered during each specific fiscal year. One or two cases can have a significant effect on the end-of-year results.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$6.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with reductions based on the recalculation of base workforce costs and realignment of staff from the Policy Analysis and Communications functions into compliance incentive programs.

- (-3.5 FTE) This is the net effect of moving FTE into compliance incentive (see above) and a small decrease in staff that will have no major effect on program efficiency.

- (-$349.0) This change reflects the net restoration of the 1.56% rescission to all program projects in addition to several technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

Compliance Monitoring
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$90,724.6***	***$93,428.0***	***$88,726.0***	***$96,025.0***	***$7,299.0***
Hazardous Substance Superfund	$1,487.0	$1,182.0	$1,165.0	$1,192.0	$27.0
Total Budget Authority / Obligations	$92,211.6	$94,610.0	$89,891.0	$97,217.0	$7,326.0
Total Workyears	625.8	629.5	621.5	623.0	1.5

Program Project Description:

EPA uses four distinct but integrated tools to maximize compliance with the nation's environmental laws. This includes: compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance data); civil and criminal enforcement (i.e., administrative and judicial enforcement actions); compliance assistance (i.e., providing information to regulated entities about how to comply with often-complex regulations); and compliance incentives (i.e., policies to motivate regulated facilities/companies to identify, disclose, and correct violations). These tools are used in combinations appropriate to address specific noncompliance patterns and environmental risks.

The Compliance Monitoring program reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions, and settlement agreements. The program conducts compliance inspections/evaluations, investigations, record reviews, and compliance rate evaluations. The program also responds to information requests, and tips and complaints from the public. The program conducts these activities to determine whether conditions exist that may present imminent and substantial endangerment to human health or the environment, and to verify whether regulated sites are in compliance with environmental laws and regulations. EPA's Compliance Monitoring program includes the management of compliance and enforcement data and data systems, evaluating the use of statistically valid compliance rates for selected national priorities, and the use of that data to manage the compliance and enforcement program.[17]

In addition, as a part of this program, the Agency reviews and responds to 100 percent of the notices for movement of hazardous waste across U.S. international borders. The Agency ensures that these wastes are properly handled in accordance with international agreements and Resource Conservation and Recovery Act regulations.[18]

[17] For more information, refer to: www.epa.gov/compliance/monitoring /index.html.
[18] For more information about the Import/Export program, refer to: www.epa.gov/compliance/international/importexport.html.

EPA conducts compliance monitoring activities, as well as coordinates with and provides support to state and Tribal partners that conduct compliance inspections/evaluations and investigations either under state or Tribal authorized programs or EPA statutory authority. EPA's activities target areas that pose risks to human health or the environment, display patterns of noncompliance, or involve disproportionately exposed populations. EPA's efforts complement state and Tribal programs to ensure compliance with laws throughout the United States. EPA works with states and tribes to identify where these compliance inspections, evaluations, and investigations will have the greatest impact on achieving environmental results.

FY 2009 Activities and Performance Plan:

In 2009, Compliance Monitoring program activities will focus on the national program priorities selected in FY 2007 for the FY 2009-FY 2014 strategic cycle, as well as improving statistically valid data collection and evaluation of compliance rates for selected national priorities. The program also will emphasize the core programs identified in the Enforcement and Compliance Assurance's FY 2008-2010 National Program Guidance as well as on supporting and overseeing authorized state/Tribal programs.[19]

To ensure the quality of these compliance inspections/evaluations/investigations, and statistical validity of the data, EPA is moving forward in evaluating compliance rates and developing inspection manuals, national policies, and establishes minimum training requirements for inspectors. EPA also identifies and provides needed training. The training program ensures that the inspectors/investigators are: 1) knowledgeable of environmental requirements and policies, 2) technically proficient in conducting the compliance inspections/evaluations and taking samples, and 3) skilled at interviewing potential witnesses and documenting inspection/evaluation results. Compliance monitoring activities include oversight of and support to states and tribes, including management of compliance monitoring grants and authorizing employees of states/tribes to conduct inspections and evaluations on EPA's behalf, where appropriate. Prior to issuing credentials to employees of states/tribes, EPA must negotiate an authorization agreement and ensure that state and Tribal inspectors are adequately trained and that credentials are tracked for security reasons.

EPA's Enforcement and Compliance program will continue its work to integrate technology, especially software and portable personal computers, into the inspection and evaluation process. Adopting 21st century tools to accomplish the Agency's mission provides an opportunity to increase efficiencies in the inspection and evaluation process, improve the timeliness and accuracy of data collection and entry, provide uniformity in the inspection and evaluation process, and increase the speed for submitting inspection and evaluation reports. Efforts will range from information sharing, evaluating equipment, developing software, and providing funding and technical support.

The Agency will continue its multi-year project to modernize its national enforcement and compliance data systems, called the Integrated Compliance Information System (ICIS). ICIS is

[19] For more information, refer to: www.epa.gov/ocfopage/npmguidance/index.htm.

being developed in three major phases. The FY 2009 contract funding level for ICIS is $6.7 million.

- Phase I of ICIS established a multi-media Federal enforcement and compliance database. It replaced outdated national and regional systems. It was implemented in FY 2002, and is the primary system that supports Enforcement and Compliance's Annual Reporting, including GPRA reporting.

- Phase II of ICIS is the modernization of the Permit Compliance System (PCS), which supports EPA and state management of the NPDES program. PCS is an old system and does not meet the current business needs of the NPDES program, especially for wet weather-related activities. In FY 2006, EPA implemented the first major release of Modernized PCS, with 21 states, two tribes and nine territories moving to the new system. EPA is working on additional releases of the modernized system to move the remaining states to ICIS in three parts:

    - Part 1 will enable states to electronically transfer discharge monitoring data (DMRs) from state systems to our new system. This will allow us to move eight to 10 states from PCS to our new system in FY 2008.
    - Part 2 will create a new electronic tool (called NetDMR) for regulated facilities to electronically sign and submit their DMRs to ICIS. We expect to launch this early in FY 2009. This tool will save the regulated community, EPA, and states millions of dollars each year, give us higher quality data, and improve our management of the NPDES program.
    - Part 3 will enable the remaining states to electronically flow all their data from their state systems to ICIS.

- Phase III of ICIS is modernization of the Air Facility System (AFS), which will improve EPA, state, and local tracking of permit compliance and enforcement data for stationary sources of air pollution.

EPA will continue to make multi-media compliance monitoring information available to the public through the Enforcement and Compliance History On-line (ECHO) Internet website during FY 2009. This site, and its more powerful companion tool that serves more than 400 government entities, the Online Targeting and Information System (OTIS), provides communities with compliance status information, averaging approximately 75,000 queries per month. The FY 2009 resource level for ECHO is $400 thousand and 1.8 FTE.

EPA will continue to review all notices for trans-boundary movement of hazardous waste. While the vast majority of the hazardous waste trade occurs with Canada, the United States also has international trade agreements with Mexico, Malaysia, Costa Rica and the Philippines; and is a member of the Organization for Economic Cooperation and Development (OECD) which issued a Council Decision controlling trans-boundary movement of hazardous waste applicable to all member countries. In 2007, EPA responded to 1,204 notices (representing 499 import notices and 705 export notices).

The Agency will continue to implement the Energy Policy Act of 2005 by inspecting underground storage tanks covering a wide range of industries including gas stations, chemical companies, and federal facilities. The program also will focus on monitoring compliance with gasoline rules.

The enforcement program will continue to provide support for workforce deployment issues relating to the national enforcement priorities. This increase in support will assist in closing resource gaps for implementation of the national priorities and generate projects that produce significant environmental benefits nationally.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of concluded enforcement cases requiring implementation of improved environmental management practices.	70	70	70	70	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated.	27	30	30	30	Percentage

EPA's Monitoring and Enforcement program achieves pollutant reductions, and improvements in regulated entities' environmental management practices through on-site inspections/evaluations and the settlement of enforcement cases. One of the key Civil Enforcement PART program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to extend the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,330.0) This reflects a net increase for payroll and cost of living for existing FTE.

- (+$3,174.0 / +1.5 FTE) This change restores a Congressionally-directed cut in the FY 2008 Omnibus. In FY 2009, this funding will be used to return inspections and evaluations to normal levels of approximately 23,000.

- (+$795.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support policy and systems development.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

Program Area: Enforcement

Civil Enforcement
Program Area: Enforcement
Goal: Land Preservation and Restoration
Objective(s): Restore Land

Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$123,003.7***	***$126,645.0***	***$129,886.0***	***$133,017.0***	***$3,131.0***
Oil Spill Response	$1,661.5	$2,065.0	$2,072.0	$2,233.0	$161.0
Hazardous Substance Superfund	$739.2	$884.0	$870.0	$0.0	($870.0)
Total Budget Authority / Obligations	$125,404.4	$129,594.0	$132,828.0	$135,250.0	$2,422.0
Total Workyears	914.1	969.1	982.1	958.2	-23.9

Program Project Description:

The Civil Enforcement program's overarching goal is to protect human health and the environment, targeting enforcement actions according to degree of health and environmental risk. The program collaborates with the Department of Justice to ensure consistent and fair enforcement of all environmental laws and regulations. The program seeks to level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance, and to deter future violations. The civil enforcement program develops, litigates, and settles administrative and civil judicial cases against serious violators of environmental laws.[20]

EPA's national enforcement and compliance assurance program is responsible for maximizing compliance with 12 environmental statutes, 28 distinct programs under those statutes, and dozens of regulatory requirements under those programs (referred to as the "core program") which apply in various combinations to a universe of 40 million regulated entities. In addition, as a means for focusing its efforts, the enforcement program identifies, in three-year cycles, specific environmental risks and noncompliance patterns as national priorities. The enforcement program coordinates with states, tribes, and within EPA, as well as soliciting public comment, to establish these priorities.

To conduct the work necessary for the 28 programs and the national priorities, the enforcement program utilizes four primary tools: compliance assistance information to prevent violations, compliance incentives for motivating self-audits by facilities/companies, compliance monitoring to identify violations, and enforcement actions to correct violations. In addition to EPA's direct

[20] For more information visit: www.epa.gov/compliance/civil/index.html; www.epa.gov/epaoswer/hazwaste/ca/backgnd.htm.

role in utilizing these tools, the enforcement program is responsible for oversight of state performance and ensuring that the national environmental laws are enforced in a consistent, equitable manner that protects public health and the environment.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to implement its core Civil Enforcement program, as well as the national compliance and enforcement priorities established in FY 2007 for 2008-2010. These priorities will build on the priorities established in FY 2004 for the years 2005-2007, including Clean Water Act "Wet Weather" discharges (water contamination resulting from sewer overflows, contaminated storm water runoff, and runoff from concentrated animal feeding operations), violations of the Clean Air Act New Source Review/Prevention of Significant Deterioration requirements and Air Toxics regulations, Resource Conservation and Recovery Act (RCRA) violations at Mineral Processing facilities, violations of RCRA/Safe Drinking Water Act/Toxic Substances Control Act/Financial Responsibility requirements, and ensuring compliance in Indian Country.

The program also will focus FY 2009 resources on trans-boundary pollutants, including international transport of hazardous waste and illegal imports by multi-state industrial violators. The Federal Facilities Enforcement program will continue to expeditiously pursue enforcement actions at Federal facilities where significant violations are discovered with a specific focus on non-compliance identified at federal laboratories and federal underground storage tanks. The Civil Enforcement program also will support the Environmental Justice program by focusing enforcement actions on industries that have repeatedly violated environmental laws in communities that may be disproportionately exposed to risks and harms from the environment, including minority and/or low-income areas. Minority and/or low income communities frequently may be disproportionately exposed to environmental harms and risks. EPA works to protect these and other burdened communities from adverse human health and environmental effects of its programs consistent with environmental and civil rights laws. Also in FY 2009, the Integrated Compliance Information System will continue to support the civil enforcement program by ensuring the security and integrity of environmental compliance data, and building the Agency's capacity to measure civil enforcement outcomes.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution	890	500	890	890	Million

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)					pounds

EPA's Monitoring and Enforcement Program achieves pollutant reductions and improvements in regulated entities' environmental management practices through the settlement of enforcement cases. There are many programs evaluated under the Civil Enforcement PART assessment. These programs include Compliance Assistance, Compliance Incentives, Compliance Monitoring, Civil Enforcement, Enforcement Training, Forensics, Superfund Enforcement, and categorical grant programs for toxic substances and sectors. One of the key Civil Enforcement PART program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$7,869.0) This reflects an increase for base payroll and cost of living for existing FTE.
- (-$5,300 \ -13.0 FTE) This reduces congressionally-directed increase in the FY 2008 Omnibus. Priority activities in this program can be funded within base resources.
- (-$1,497.0 \ -9.2 FTE) This decrease transfers resources to the criminal enforcement program to continue the Agency's efforts toward increasing the number of criminal investigators.
- (+$2,059.0) This change reflects restoration of the 1.56% rescission to all program projects. This funding will ensure the necessary resources to maintain an effective enforcement program.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA; SBLRBRERA; CERCLA; PPA; CERFA; AEA; PPA; UMTRLWA; EPAct.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$39,721.6***	***$39,688.0***	***$40,742.0***	***$44,384.0***	***$3,642.0***
Hazardous Substance Superfund	$7,895.7	$9,167.0	$9,053.0	$7,830.0	($1,223.0)
Total Budget Authority / Obligations	$47,617.3	$48,855.0	$49,795.0	$52,214.0	$2,419.0
Total Workyears	259.2	268.9	268.9	278.1	9.2

Program Project Description:

EPA's criminal enforcement program investigates and helps prosecute environmental violations which seriously threaten public health and the environment and which involve knowing or criminal behavior on the part of the violator. The criminal enforcement program deters violations of environmental laws and regulations by demonstrating that the regulated community will be held accountable, through jail sentences and criminal fines, for such violations. Bringing criminal cases sends a strong message for potential violators, enhancing aggregate compliance with laws and regulations.

The criminal enforcement program conducts investigations and requests that cases be prosecuted. Where appropriate, it helps secure plea agreements or sentencing conditions that will require defendants to undertake projects to improve environmental conditions or develop environmental management systems to enhance performance. The Agency is involved in all phases of the investigative process and works with other law enforcement agencies to present a highly visible and effective force in the Agency's overall enforcement strategy. Cases are presented to the Department of Justice for prosecution, with special agents serving as key witnesses in the proceedings.

The program also participates in task forces with state and local law enforcement, and provides specialized training at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA. FLETC provides one of the few opportunities for state, local, and tribal environmental enforcement professionals to obtain criminal investigation training.[21]

FY 2009 Activities and Performance Plan:

In FY 2009, the criminal enforcement program will continue implementing its strategic approach by emphasizing investigations and prosecutions in areas of national and regional enforcement

[21] For more information visit: http://www.epa.gov/compliance/criminal/index.html.

priority focus, as well as other types of "high impact" cases that affect human health and the environment, and enhance compliance and deterrence. The criminal enforcement program will continue to enhance its collaboration and coordination with the civil enforcement program to ensure that the enforcement program as a whole responds to violations as effectively as possible. That is accomplished by establishing an effective regional case screening process to identify the most appropriate civil or criminal enforcement responses for a particular violation, and by taking criminal enforcement actions against long-term or repeated significant non-compliers where appropriate. Focusing on parallel proceedings and other mechanisms allowing the Agency to use the most appropriate tools to address environmental violations and crimes will also facilitate coordination.

EPA's criminal enforcement program is committed to fair and consistent enforcement of Federal laws and regulations, as balanced with the flexibility to respond to region-specific environmental problems. Criminal enforcement has management oversight controls and national policies in place to ensure that violators in similar circumstances receive similar treatment under Federal environmental laws. Consistency is promoted by evaluating all investigations from the national perspective; overseeing all investigations to ensure compliance with national priorities; conducting regular "docket reviews" (detailed review of all open investigations in each EPA Regional office) to ensure consistency with investigatory discretion guidance and enforcement priorities, and developing, implementing, and periodically reviewing and revising policies and programs.

In FY 2009, the program will use data from the Criminal Case Reporting System made available through enhancements to be completed in FY 2008. Information associated with all closed criminal enforcement cases will be used to systematically compile a profile of criminal cases, including the extent to which the cases support Agency-wide, program-specific, or Regional enforcement priorities. The profile also will describe the impact of the cases in terms of pollution released into the environment and resulting environmental harm such as the degradation of drinking water wells, human populations injured or made ill, and aquatic or animal life harmed.

In FY 2009, the program also will seek to deter environmental crime by increasing the volume and quality of leads reported to EPA by the public through the tips and complaints link on EPA's website. The web link was established on EPA's homepage in FY 2006.

The EPA Enforcement of Environmental Laws (Criminal) PART program received an "adequate" rating in 2004 with the addition of new outcome measures. The program created a measure implementation plan to set targets and milestones for performance measures. The program revised its Case Conclusion Data Sheet, conducted training, and issued the form to begin collecting new data for Criminal Enforcement PART measures. The program developed a target and baseline for the pollution reduction measure in 2006. The baselines and targets for the Recidivism and the Pollutant Impact measures will be developed in FY 2008.

Performance Targets:

In FY 2009, the criminal enforcement program's Pollution Reduction measure will be reported against the baseline and target set in FY 2006, which uses an average of pollutant reduction data from three fiscal years (FYs 2003-2005). The results of this measure are likely to fluctuate annually due to the specific characteristics of the enforcement cases concluded during a given fiscal year. However, long-term trend analysis of this information will help the program to identify and prioritize cases that present the most serious threats to public health and the environment.

In addition, in FY 2009, the Criminal Enforcement program will report its PART-approved measures on "improved environmental management" and "recidivism". The program will also develop the targets and baselines for its "pollutant impact" measure (i.e., the amount of illegal pollution released into the environment that cannot be treated, remediated or otherwise reduced) in order to begin external reporting of that measure in FY 2008. Work under this program supports the compliance and environmental stewardship objective. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,239.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$1,497.0 / +9.2 FTE) This increase transfers FTE and associated payroll resources from the civil enforcement program to continue the Agency's efforts to increase the number of criminal investigators.

- (-$1,700.0) This reduces Congressionally-directed funding in the FY 2008 Omnibus.

- (+10.8 FTE) This increase reflects a realignment of FTE from the Superfund appropriation to the Environmental Program and Management appropriation to more accurately reflect the nature of the current criminal investigator workload. This realignment does not reflect a change in the amount of criminal investigator workload.

- (-$1,000.0) In FY 2006, EPA provided these resources to support physical protection of the Agency's Administrator. These resources are being consolidated with other EPA security resources in the Facilities Infrastructure and Operations program project. There is no negative impact to the criminal enforcement program because these resources were provided for the protection of the Administrator and not to investigate or prosecute environmental crimes.

- (+$700.0) This increase provides resources for Permanent Change of Station (PCS) moves to deploy criminal investigators to duty stations where they can best meet the program's mission needs.

- (+$906.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support

costs across programs. Funds will be used to support ongoing and new criminal investigations.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; Residential Lead-Based Paint Hazard Reduction Act (RLBPHRA); FIFRA; Ocean Dumping Act (i.e., MPRSA); Pollution Prosecution Act; Title 18 General Federal Crimes (e.g., false statements, conspiracy); Powers of Environmental Protection Agency (18 U.S.C. 3063).

Enforcement Training
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$2,668.3***	***$3,145.0***	***$3,096.0***	***$3,043.0***	***($53.0)***
Hazardous Substance Superfund	$630.7	$840.0	$827.0	$858.0	$31.0
Total Budget Authority / Obligations	$3,299.0	$3,985.0	$3,923.0	$3,901.0	($22.0)
Total Workyears	20.7	20.9	20.9	20.9	0.0

Program Project Description:

The Pollution Prosecution Act is the statutory mandate for the Agency's Enforcement Training program that provides environmental enforcement and compliance training nationwide, through EPA's National Enforcement Training Institute (NETI). The program oversees the design and delivery of core and specialized enforcement courses that sustain a well-trained workforce to carry out the Agency's enforcement and compliance goals. Courses are provided to lawyers, inspectors, civil and criminal investigators, and technical experts at all levels of government.

FY 2009 Activities and Performance Plan:

In FY 2009, NETI will develop and deliver training to address important gaps in enforcement and compliance assurance knowledge and skills identified in needs assessments and national strategic plans. The NETI advisory service will assist the Agency's enforcement experts to develop course agendas and determine the most effective methods to deliver quality training to the nation's enforcement professionals. The program funds training for states and tribes through cooperative agreements with state/Tribal entities. NETI operates training facilities in Washington, D.C. and in Lakewood, CO.

NETI also maintains a training center on the Internet, "NETI Online," which offers targeted technical training courses and the capability to track individual training plans. "NETI Online's" training information clearinghouse includes links to course offering lists, as well as tools for Agency training providers to assist with developing, managing, and evaluating the program's training.[22]

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, at OMB's direction, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other

[22] For more information, refer to: http://www.epa.gov/compliance/training/neti/index.html

measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance Program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

One of the program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$73.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$126.0) This change reflects restoration of the 1.56% rescission to all program projects combined with technical changes such as realignment of IT, travel or other support costs across programs

Statutory Authority:

PPA; RLBPHRA; RCRA; CWA; SDWA; CAA; TSCA; EPCRA; TSCA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$6,319.2***	***$3,822.0***	***$6,399.0***	***$3,811.0***	***($2,588.0)***
Hazardous Substance Superfund	$911.1	$757.0	$745.0	$757.0	$12.0
Total Budget Authority / Obligations	$7,230.3	$4,579.0	$7,144.0	$4,568.0	($2,576.0)
Total Workyears	23.0	16.9	16.9	16.9	0.0

Program Project Description:

The Environmental Justice (EJ) program addresses environmental and/or human health concerns in all communities, including minority and/or low-income communities. Research has shown that the minority and low-income segments of the population have been, or could be, disproportionately exposed to environmental harm and risks. Thus, EPA focuses attention on minority and low-income communities to ensure that EPA actions do not adversely affect these or any other communities that face critical environmental or public health issues.

The Environmental Justice program also provides education, outreach, and data to communities and facilitates the integration of environmental justice considerations into Agency programs, policies, and activities. The Agency also supports state and Tribal environmental justice programs and conducts outreach and technical assistance to states, local governments, and stakeholders on environmental justice issues.[23]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to enhance its environmental justice integration and collaborative problem-solving initiatives. By fully integrating environmental justice considerations within its programs, policies, and activities, EPA will build greater capacity within its Headquarters and Regional offices to better address the environmental and/or human health concerns of all communities, including minority and/or low-income communities. For example, EPA's Enforcement and Compliance Assurance program will continue to develop the Environmental Justice Strategic Assessment Tool (EJSEAT) and other online geographic assessment tools, and conduct environmental justice program reviews. Through its financial assistance and training programs, EPA helps to build collaborative problem-solving capacity within communities affected disproportionately to environmental risks and harms.

[23] For more information on the Environmental Justice program, please refer to: www.epa.gov/compliance/environmentaljustice/index.html.

In FY 2009, EPA's Environmental Justice program will continue to lead an Agency-wide effort to more fully integrate environmental justice considerations into EPA's programs and operations, including its five-year strategic planning and annual budget processes. The Agency's Strategic Plan reflects a strategic target for identifying the cumulative number of communities with potential environmental justice concerns that achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies to applicable portions of the Headquarters program and Regional offices' environmental justice activities.

The program also will work with other EPA offices to develop customized online tools that help the Agency integrate environmental justice considerations into its day-to-day work in an efficient and effective manner. The enforcement program will test the EJSEAT tool to help ensure that enforcement and compliance activities focus on communities that need the most attention. The EJSEAT uses a set of indicators to help the enforcement program identify areas that may have significant environmental and/or public health issues.

EJSEAT can potentially enhance EPA's ability to protect burdened communities, including minority and low-income communities, from adverse human health and environmental effects, consistent with existing environmental and civil rights laws, and their implementing regulations, as well as Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued February 11, 1994). Since FY 2005, the enforcement program has made environmental justice an element of each of its national priorities. The assessment tool was field-tested as part of an extensive agency review process during FY 2007. The tool will undergo a comprehensive national test during FY 2008 to determine how to best deploy an assessment tool that will: 1) identify, in a more consistent and analytically rigorous manner, potential disproportionately high and adversely affected areas that are referred to as "Areas with Potential Environmental Justice Concerns," 2) assist the enforcement program make fair and efficient resource deployment decisions, and 3) consistently analyze how enforcement actions have affected areas with minority and/or low-income populations.

In addition, EPA will enhance and maintain the Online Environmental Justice Geographical Assessment Tool (EJGAT), to help individuals, government, industry, and organizations better identify and address environmental and public health issues that may affect them. The EJGAT provides ready access to environmental, public health, economic, and social demographic information from EPA and other government sources.

In FY 2009, EPA will maintain the Environmental Justice Collaborative Problem-Solving (CPS) Cooperative Agreement Program. This grant program provides financial assistance to affected local community-based organizations that wish to engage in constructive and collaborative problem-solving. This is achieved by utilizing tools developed by EPA and others to find viable solutions for their community's environmental and/or public health concerns.

EPA will continue to manage its Environmental Justice Small Grants program, which assists community-based organizations in developing solutions to local environmental issues. Since 1994, EPA has awarded more than $31 million to over 1,100 community-based organizations and others to address local environmental and/or health issues.

In FY 2009, the EJ program will continue to use alternative dispute resolution (ADR), where appropriate, as an effective means of addressing disputes by training local community organizations on its use. Through the use of ADR, the EJ program expects to reduce time and resources accompanying litigation and anticipates that decisions reached will be more efficient and favorable for all parties involved. The Environmental Justice program also will continue to assist program offices and other environmental organizations and government agencies in the delivery of customized training to increase the capacity of their personnel to effectively address issues of environmental justice. This training includes both in-person presentations and development of online training.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

This program was included in the Civil Enforcement PART review in 2004, which received an overall rating of "adequate" based on development of a Measures Implementation Plan. One of the program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to extend the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure. Work under this program supports the Healthy Communities objective. By 2011, 30 communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies.

EPA will identify the cumulative number of communities with potential environmental justice concerns that achieve significant measurable environmental and/or public health improvements through collaborative problem-solving strategies.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$253.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$2,678.0) This reduces the Congressionally-directed funding in the FY 2008 Omnibus.
- (-$163.0) This change reflects restoration of the 1.56% rescission to all program projects combined with technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Executive Order 12898; RCRA; CWA; SDWA; CAA; TSCA; EPCRA; FIFRA; NEPA; Pollution Prevention Act.

NEPA Implementation
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$13,863.5***	***$14,366.0***	***$14,142.0***	***$16,295.0***	***$2,153.0***
Total Budget Authority / Obligations	$13,863.5	$14,366.0	$14,142.0	$16,295.0	$2,153.0
Total Workyears	108.2	104.0	104.0	106.0	2.0

Program Project Description:

As required by National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the NEPA Implementation program reviews Environmental Impact Statements (EIS) that evaluate the anticipated environmental impacts of proposed major Federal actions, including options for avoiding or mitigating them, and makes the comments available to the public. The program manages the Agency's official filing activity for all Federal EISs, in accordance with a Memorandum of Understanding with the Council on Environmental Quality. The program also manages the review of Environmental Impact Assessments of non-governmental activities in Antarctica, in accordance with the Antarctic Science, Tourism, and Conservation Act (ASTCA).

In addition, the program fosters cooperation with other Federal agencies to ensure compliance with applicable environmental statutes, promotes better integration of pollution prevention and ecological risk assessment elements into their programs, and provides technical assistance in developing projects and associated environmental impacts that prevent adverse environmental impacts. The Agency targets high impact Federal program areas, such as energy/transportation-related projects and water resources projects. The program also develops policy and technical guidance on issues related to NEPA, the Endangered Species Act, the National Historic Preservation Act and relevant Executive Orders (EOs).[24]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to work with other Federal agencies to streamline and to improve their NEPA processes. Work also will continue to focus on a number of key areas such as review and comment on the amount of on-shore and off-shore liquid natural gas facilities, coal bed methane development and other energy-related projects, nuclear power/hydro-power plant licensing/re-licensing, highway and airport expansion, military base realignment/redevelopment, flood control and port development, and management of national forests and public lands. In FY

[24] For more information, refer to: www.epa.gov/compliance/nepa.

2007, the program completed the national deployment of the web-based NEPAssist environmental assessment tool, which assists Federal, state, and local agencies identify nationally/regionally significant environmental features/resources and streamline their respective environmental review processes. In FY 2007, approximately 70 percent of the environmental effects identified by EPA were reduced through project modifications and/or the inclusion of mitigation commitments. Of particular note, EPA's comments on the EIS on the Red River Valley Water Supply Project, in North Dakota, helped ensure that the project will cause no significant adverse water quality effects from the potential inter-basin transfer of invasive species. EPA's successful collaboration efforts with Federal land management agencies in the west ensures the growing number of oil and natural gas development projects in that area do not cause significant adverse air quality impacts.

The NEPA Implementation program also guides EPA's own compliance with NEPA, other applicable statutes and EOs, and related Environmental Justice requirements. Corresponding efforts include EPA-issued new source National Pollutant Discharge Elimination System (NPDES) permits in cases where a state or tribe has not assumed responsibility for the NPDES program, off-shore oil and gas projects, Clean Water Act wastewater treatment plant grants, and special appropriation grants for wastewater, water supply and solid waste collection facilities. In FY 2008, the Agency implemented the revised 40 CFR Part 6 Regulations "Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act," which established a number of new Categorical Exclusions to streamline EPA's NEPA compliance process. In FY 2009, 90 percent of EPA projects subject to NEPA environmental assessment (EA) or EIS requirements (e.g., water treatment facility projects and other grants, new source NPDES permits and EPA facilities) are expected to result in no significant environmental impact.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$796.0) This reflects a net increase for payroll and cost of living for all FTE.

- (-1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These reductions will not

- impede Agency efforts to maximize efficiency and effectiveness in carrying out its programs.

- (+$1,000.0 / +3.0 FTE) This reflects additional resources for the increased workload for energy-related direct implementation permitting and NEPA document reviews, in order to reduce the review and assessment times of NEPA evaluations and promote innovative and collaborate problem solving.

- (+$357.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support NEPA analyses for priority projects.

Statutory Authority:

CAA; NEPA; ASTCA; CWA; ESA; NHPA; AHPA; FCMA; FWCA; EO 12898.

Program Area: Geographic Programs

Geographic Program: Chesapeake Bay
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$20,274.1***	***$28,768.0***	***$30,528.0***	***$29,001.0***	***($1,527.0)***
Total Budget Authority / Obligations	$20,274.1	$28,768.0	$30,528.0	$29,001.0	($1,527.0)
Total Workyears	22.7	21.7	21.7	22.7	1.0

Program Project Description:

EPA's Chesapeake Bay work is based on a collaborative regional partnership formed to direct and conduct restoration of the Bay and its tidal tributaries. Partners include EPA as the Federal government representative; the Chesapeake Bay Commission, a tri-state legislative body; Maryland; Virginia; Pennsylvania; Delaware; New York; West Virginia; the District of Columbia; and participating citizen advisory groups. Chesapeake 2000, a comprehensive and far-reaching agreement, guides restoration and protection efforts through 2010, and focuses on improving water quality. The challenge is to reduce pollution and restore aquatic habitat to the extent that the Bay's waters can be removed from the Clean Water Act (CWA) "impaired" waters list.

The Chesapeake Bay Program (CBP) has shown how Federal agencies and states can work together collaboratively. The greatest success in the last 5 years has been the water quality initiative, which has resulted in:

- New water quality standards for the Bay and its tidal tributaries that protect living resources and are both more attainable and more valid scientifically, incorporating innovative features such as habitat zoning and adoption of area-specific submerged aquatic vegetation acreage targets;

- To meet the new water quality standards, the adoption of nutrient and sediment allocations for all parts of the watershed which reflect a consensus of all six basin states, the District of Columbia, and EPA;

- Tributary-specific pollution reduction and habitat restoration plans which spell out the treatment technologies, Best Management Practices (BMPs), and restoration goals for riparian forest buffers and wetlands which must be employed to achieve the allocations;

- A common National Pollutant Discharge Elimination System (NPDES) permitting approach for all significant wastewater treatment facilities that unites both upstream and

downstream states in the enforcement of the new water quality standards and allocations, including implementation of watershed permitting and nutrient trading.

(For more information see http://www.epa.gov/region03/chesapeake/.)

FY 2009 Activities and Performance Plan:

Progress on Bay restoration must be accelerated substantially as the restoration goal of 2010 approaches. EPA remains firmly committed to the 2010 goal and will continue working with other Bay Program partners to identify additional opportunities to accelerate progress and ensure that water quality objectives are achieved as soon as possible. The water quality standards and permitting approach, which applies to more than 450 facilities basin-wide, will speed up nutrient reductions from wastewater facilities. To maximize the Federal investment, EPA places a premium on improving access to available assistance programs and targeting them to measures that yield the greatest water quality benefit for the expenditure, as well as using innovative approaches such as nutrient trading and watershed permitting programs.

CBP partners are emphasizing implementation of the most cost-effective BMPs, using the Program's analytical capability. Priorities for funding restoration efforts were established by CBP leaders in 2005 to help focus available resources. EPA and its partners are also funding watershed projects to test the effectiveness of key nonpoint source BMPs and spur innovations such as better technology and market incentives. In order to accelerate the pace of water quality and aquatic habitat restoration, EPA and Bay area states are taking a number of steps to make the most cost-effective use of available regulatory, incentive, and partnership tools, including the following key actions for FY 2009:

- Fully implement base clean water programs in the Bay. Core CWA programs provide a foundation of water pollution control and wetlands protection that is critical to protecting and restoring Chesapeake Bay tidal waters. Clean Air Act regulations controlling emissions of nitrogen compounds also contribute substantially to Bay restoration.

- Support implementation of watershed permitting and nutrient trading programs. A 2005 study identified ways to use EPA's regulatory authorities more effectively to advance Bay restoration, and these recommendations are being implemented. In FY 2009, EPA will support implementation of watershed permitting and nutrient trading programs. EPA and the states will set stronger nutrient limits for wastewater facilities under the Chesapeake Bay permitting approach. New NPDES Concentrated Animal Feeding Operation (CAFO) permit requirements will be put in place. To curb urban/suburban storm water loads and damage to the watershed's carrying capacity from rapidly increasing impervious surface acreage and loss of riparian buffers, EPA will cooperate with partners to strengthen implementation of NPDES municipal separate storm sewer systems (MS4) and construction permit requirements.

- Accelerate Bay cleanup by focusing on the most cost-effective nutrient-sediment control and key habitat restoration strategies. The states' pollution control and habitat restoration strategies (tributary strategies) define specific, localized approaches for reducing nutrient

and sediment loads from agricultural operations, the largest category of sources. They emphasize agricultural BMPs such as nutrient management, low/no-till cultivation, cover crops, and forest buffer restoration, which are among the most cost-effective of all measures for controlling nutrient-sediment pollution loads. EPA and state partners will integrate tributary strategy implementation with Farm Bill programs.

- Enhance the use of monitoring, modeling and demonstration projects to target and assess the effectiveness of restoration actions. EPA is upgrading its watershed modeling capability, to improve tributary strategy planning and assessment. The Chesapeake Bay Phase 5 Watershed Model is being calibrated and verified for management application. EPA and U.S. Army Corps of Engineers are upgrading the Chesapeake Bay water quality model and are cooperating with the U.S. Geological Survey (USGS), National Oceanic and Atmospheric Administration (NOAA), and U.S. Department of Agriculture to organize an assessment of regional sediment management.

- Strengthen accountability for implementation of restoration measures. In 2006 and 2007, the CBP substantially revised its indicators and reporting for Chesapeake Bay health and restoration, both to improve accountability and to respond to recommendations from the Government Accountability Office. The indicators will be expanded in 2008-2009 to include tributary health and restoration reporting. EPA, NOAA, and the states will collaborate on improved integration of water quality and fisheries monitoring and reporting under the CBP's precedent-setting agreement in 2005 to establish ecosystem-based fisheries management for the Chesapeake Bay.

- Use the CBP Federal partnership for cooperative conservation to improve access to available financial and technical assistance programs, and link Federal programs to CBP's strategic priorities. EPA and the Bay states will strengthen partnerships with complementary Federal agency programs that fund agricultural conservation and ecosystem restoration, manage lands and fisheries, and contribute to Bay scientific understanding.

The Chesapeake Bay Program completed a PART review in 2006 and achieved a "moderately effective" rating. New performance measures developed for the FY 2006 PART assessments are included in the FY 2009 request. Follow-up actions in the improvement plan include: investigating potential methods to characterize the uncertainty of the watershed and water quality models, developing a comprehensive implementation strategy, and promoting and tracking the most cost effective restoration activities to maximize water quality improvements.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Total nitrogen reduction practices implementation achieved a a result of agricultural best	43,529	47,031	48,134	49,237	Pounds

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	management practice implementation per million dollars to implement agricultural BMPs.					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	87	84	85	87	Percent Goal Achieved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of goal achieved for implementation of phosphorus reduction practices (expressed as progress meeting the phosphorus reduction goal of 14.36 million pounds).	62	64	66	69	Percent Goal Achieved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of goal achieved for implementation of sediment reduction practices (expressed as progress meeting the sediment reduction goal of 1.69 million pounds).	62	61	64	67	Percent Goal Achieved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	69	70	74	79	Percent Goal Achieved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.5 million pounds).	46	47	50	53	Percent Goal Achieved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of forest buffer planting goal of 10,000 miles achieved.	53	53	60	68	Percent Goal Achieved

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$104.0) This reflects an increase for payroll and cost of living for all FTE.
- (+1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.
- (-$1,631.0) This total is the net of the 1.56% rescission and the discontinuation of funding added in the FY 2008 Omnibus for the Small Watershed Grants Program.

Statutory Authority:

CWA.

Geographic Program: Great Lakes
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$23,522.7***	***$21,757.0***	***$21,686.0***	***$22,261.0***	***$575.0***
Total Budget Authority / Obligations	$23,522.7	$21,757.0	$21,686.0	$22,261.0	$575.0
Total Workyears	52.7	58.1	58.1	58.1	0.0

Program Project Description:

The Great Lakes are the largest system of surface freshwater on earth, containing 20 percent of the world's surface freshwater and accounting for 84 percent of the surface freshwater in the United States. The watershed includes 2 nations, 8 U.S. states, a Canadian province, more than 40 tribes, and more than one-tenth of the U.S. population. The goal of the Agency's Great Lakes Program is to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem. The Great Lakes Program:

- Monitors and reports annual air and water monitoring data for nutrients, toxics and biota for five lakes in partnership with other Federal, state and Canadian agencies.
- Operates the bi-national Great Lakes Integrated Atmospheric Deposition Network.
- Performs toxic reduction activities by implementing the Great Lakes Bi-national Toxics Strategy for reduced loadings of targeted pollutants in accordance with the Great Lakes Water Quality Agreement (GLWQA).[25]
- Performs demonstrations and investigations related to contaminated sediments in Great Lakes rivers and harbors.
- Protects and restores habitat to decrease the loss of high quality ecological communities and rare species, and to increase ecosystem conditions and functions to sustain native plants and animals in habitat of the necessary size, mixture, and quality.
- Addresses invasive species, though collaboration with partners, by emphasizing prevention of additional introductions.

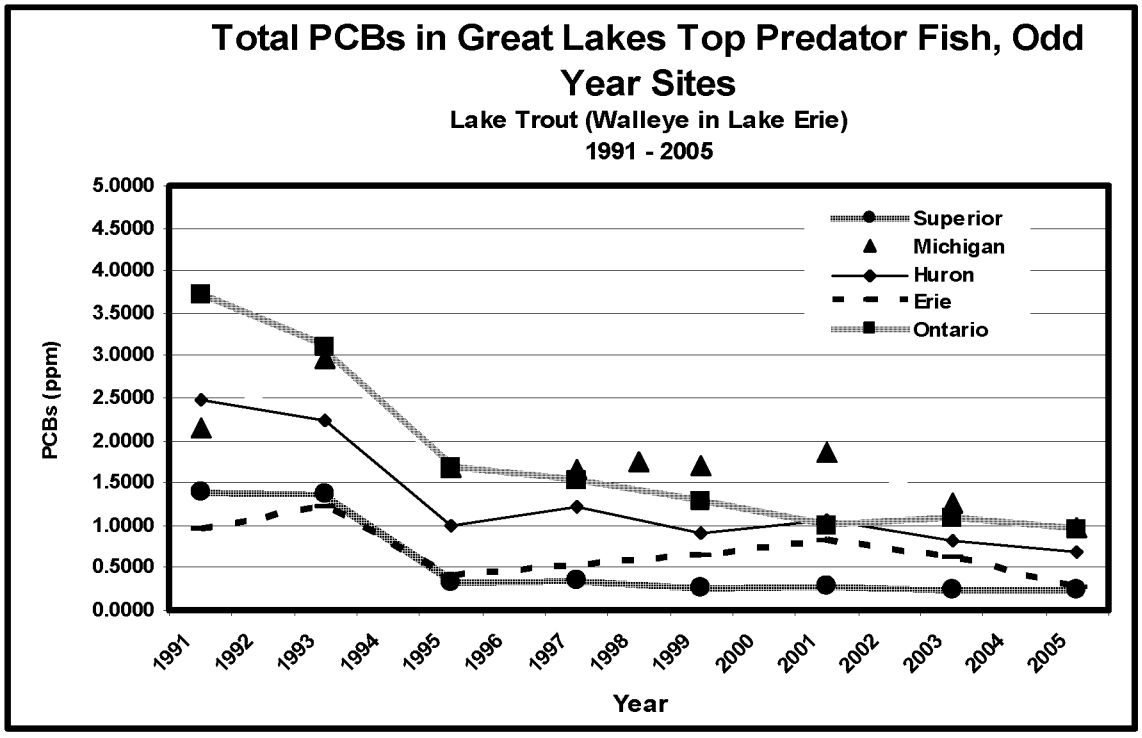
[25] U.S. EPA Great Lakes National Program Office. April 1997. *The Great Lakes Bi-national Toxics Strategy*. Washington, DC. http://www.epa.gov/glnpo/p2/bns.html.

(See http://www.epa.gov/glnpo/ for more information.)

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue efforts to protect and restore the Great Lakes, and will work with state, local, and Tribal partners, using the Great Lakes Regional Collaboration's strategy as a guide. EPA will continue working with partners to restore the chemical, physical, and biological integrity of the Great Lakes ecosystem through core water protection programs. EPA will give priority to working with states and local communities to support removal of beneficial use impairments in Areas of Concern (AOCs) and clean-up and de-listing of 8 AOCs by 2011. An AOC is a geographic area that fails to meet the objectives of the GLWQA where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life. In general, these are bays, harbors, and river mouths with damaged fish and wildlife populations, contaminated bottom sediments, and past or continuing loadings of toxic and bacterial pollutants. EPA will continue to work to reduce PCB concentrations in lake trout and walleye (see Figure 1), and for 90 percent of monitored Great Lakes beaches to be open 95 percent of the season.

EPA will work with states, industry, tribes, non-governmental organizations, and other stakeholders to coordinate Great Lakes monitoring, information management, pollution prevention, contaminated sediments, habitat, invasive species, lake-wide management, and remedial action plan programs to be consistent with the Great Lakes Regional Collaboration Strategic Plan. Following intensive ship- and land-based monitoring of Lakes Michigan, Superior, and Huron from CY 2005 through CY 2007, EPA will focus on similar cooperative monitoring efforts with Canada on Lake Ontario in CY 2008, and on Lake Erie in CY 2009. In FY 2009, EPA plans to initiate nearshore chemical and biological monitoring of the 10,000 miles of Great Lakes nearshore waters. EPA will thus collect better information related to the most productive of the Great Lakes waters, intakes, outfalls, and beaches.



PCBs in Great Lakes Top Predator Fish [26]

EPA will continue to monitor the annual occurrence of high rates of oxygen depletion, which lead to low dissolved-oxygen levels in the Lake Erie "dead zone." Despite U.S. and Canadian success in achieving total phosphorus load reductions, phosphorus in the central basin of Lake Erie has increased since the early 1990's to levels substantially in excess of the GLWQA Objective of 10ug-P/l.[27] EPA will continue working with the National Oceanic and Atmospheric Association (NOAA) to investigate the depleted oxygen conditions, to update models of Lake Erie's response to nutrients, and to fill in information gaps through modeling nutrient dynamics processes.

With preliminary results from grants it issued in FY 2007, EPA will continue to lead Canadian and U.S. Federal agencies and the academic community in exploring causes of the rapid decline of the *Diporeia* population in the Great Lakes. The decline may be related to invasive species. *Diporeia* are normally the predominant organism at the base of the Great Lakes food web (up to 70 percent of living biomass of a healthy lake bottom). Their decline may portend adverse affects on Great Lakes fish and fisheries.

[26] A sample of 50 whole fish is collected each year (x-axis). 10 sets of 5 fish are composited and averaged for the data points above. Great Lakes Fish Monitoring Program – Quality Assurance Project Plan for Sample Analysis, University of Minnesota. http://www.epa.gov/glnpo/glindicators/fishtoxics/GLFMP%20QAPP%20v7.pdf. Great Lakes Fish Monitoring Program – Quality Assurance Project Plan for Sample Collection Activities, Great Lakes National Program Office. http://www.epa.gov/glnpo/glindicators/fishtoxics/GLFMP_QAPP_082504.pdf. Quality Management Plan for the Great Lakes National Program Office. EPA905-R-02-009. October 2002, Approved April 2003. http://www.epa.gov/glnpo/qmp/.

[3] Great Lakes National Program Office Annual Monitoring Program - Changes in Phosphorus levels and direction over time, Great Lakes Environmental Database (http://www.epa.gov/grtlakes/glindicators/index.html).

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples.	6	5	5	5	Percent Annual Decrease

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes Basin.	8	7	7	7	Percent Annual Decrease

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of Beneficial Use Impairments removed within Areas of Concern.	9	No Target Estab-lished	16	21	Cum. Number BUI Removed

Each Great Lakes performance measure reflects the results of multiple EPA base programs and the activities of other organizations working to improve Great Lakes environmental conditions. Ecosystem improvement on a scale as large as the Great Lakes is likely to be reflected in time periods greater than a year, consequently the overall Great Lakes ecosystem condition as measured by a Great Lakes Index will not be reported until 2011. The score to be reported in FY 2011 for overall ecosystem health of the Great Lakes is expected to improve slightly from the score reported in FY 2007.

Following long-term trends, average concentrations of PCBs in whole lake trout and walleye samples are expected to continue to decline by 5 percent annually at monitored sites, reflecting modest continual improvement in Great Lakes health. Also, following long-term trends, average concentrations of toxic chemicals (PCBs) in the air at monitored sites in the Great Lakes basin are expected to continue to decline by 7 percent annually.

Forty-three AOCs have been identified: 26 located entirely within the United States; 12 located wholly within Canada; and 5 that are shared by both countries. Since 1987, the Great Lakes National Program Office (GLNPO) has tracked the 31 AOCs that are within the U.S. or shared

with Canada. On June 19, 2006, the Oswego River, New York's AOC, became the first U.S. AOC to be officially removed from the list of U.S. AOCs. Guided by the Great Lakes Regional Collaboration goals, EPA and the Great Lakes states have renewed efforts to de-list (clean up) the U.S. AOCs. These renewed efforts will be assisted through annual targets for restoration of beneficial use impairments and through a long term target for de-listing of AOCs.

The EPA Great Lakes Program received an "adequate" PART rating in 2007.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$386.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$189.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

1990 Great Lakes Critical Programs Act; 2002 Great Lakes and Lake Champlain Act (Great Lakes Legacy Act); CWA; Coastal Wetlands Planning, Protection, and Restoration Act of 1990; Estuaries and Clean Waters Act of 2000; North American Wetlands Conservation Act; US-Canada Agreements; WRDA; 1909 The Boundary Waters Treaty; 1978 GLWQA; 1987 GLWQA; 1987 Montreal Protocol on Ozone Depleting Substances; 1996 Habitat Agenda; 1997 Canada-U.S. Great Lakes Bi-national Toxics Strategy.

Geographic Program: Long Island Sound
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$1,361.4***	***$467.0***	***$4,922.0***	***$467.0***	***($4,455.0)***
Total Budget Authority / Obligations	$1,361.4	$467.0	$4,922.0	$467.0	($4,455.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA supports the protection and restoration of Long Island Sound through its Long Island Sound Office (LISO), established under Section 119 of the Clean Water Act (CWA), as amended. EPA assists the states in implementing the Sound's 1994 Comprehensive Conservation and Management Plan (CCMP), developed under Section 320 of the CWA. EPA and the states of Connecticut and New York work in partnership with regional water pollution control agencies, scientific researchers, user groups, environmental organizations, industry, and other interested organizations and individuals to restore and protect the Sound and its critical ecosystems.

The CCMP identified six critical environmental problem areas that require sustained and coordinated action to address: the effects of hypoxia on the ecosystem, including living marine resources and commercially valuable species (*e.g.*, American lobster); the impacts of toxic contamination in the food web and on living resources; pathogen contamination and pollution; floatable debris deposition; the impacts of habitat degradation and loss on the health of living resources; and the effects of land use and development on the Sound, its human population and public access to its resources. The CCMP also identifies public education, information, and participation as priority action items in protecting and restoring the Sound.

The states of New York and Connecticut are active in reducing nitrogen through their innovative and nationally-recognized pollution trading programs. In 2006, the states surpassed the Total Maximum Daily Load nitrogen discharge target of 42,171 trade-equalized (TE) lbs/day, discharging only 41,228 TElbs/day, a savings of 943 pounds of nitrogen per day or 172 tons annually from entering the Sound. In 2007, the states restored or protected more than 197 acres of critical coastal habitat, and reopened more than 22 miles of river corridors to anadromous fish passage through construction of fishways or removal of barriers to fish passage, surpassing annual targets for these areas of 50 acres and 8.3 miles, respectively.

(See http://www.longislandsoundstudy.net and http://www.epa.gov/region01/eco/lis for further information.)

FY 2009 Activities and Performance Plan:

EPA will continue to oversee implementation of the Long Island Sound Study (LISS) CCMP in 2009 by coordinating the cleanup and restoration actions of the LISS Management Conference as authorized under Sections 119 and 320 of the CWA. EPA's FY 2009 efforts will focus on the following:

- Continued emphasis on reducing nitrogen loads from point and nonpoint sources of pollution, which is expected to reduce the area of the Sound that is seasonally impaired as habitat for fish and shellfish because of low dissolved oxygen levels, a condition called hypoxia. LISO will work with the states of New York and Connecticut to implement the nitrogen Total Maximum Daily Load approved by EPA in April 2001.

- Coordinating priority watershed protection programs through the Long Island Sound Management Conference partners to ensure that efforts are directed toward priority river and stream reaches that affect Long Island Sound. Watershed protection and nonpoint source pollution controls will help reduce the effects of runoff pollution on rivers and streams discharging to the Sound, and restoration and protection efforts will increase streamside buffer zones as natural filters of pollutants and runoff.

- Year-round and intensive seasonal monitoring of water quality, including environmental indicators such as dissolved oxygen levels, temperature, salinity, and water clarity, and biological indicators such as chlorophyll *a*. This monitoring will assist Management Conference partners in assessing environmental conditions that may contribute to impaired water quality and in developing strategies to address impairments.

- Protecting and restoring critical coastal habitats that will improve the productivity of tidal wetlands, inter-tidal zones, and other key habitats that have been adversely affected by unplanned development, overuse, or land use-related pollution effects.

- Stewardship of ecologically and biologically significant areas, and identification and management of recreationally important areas, will assist in developing compatible public access and uses of the Sound's resources.

- Coordinating the Long Island Sound Science and Technical Advisory Committee in conducting focused scientific research into the causes and effects of pollution on the Sound's living marine resources, ecosystems, water quality and human uses to assist managers and public decision-makers in developing policies and strategies to address environmental, social, and human health impacts.

- Coordinating the Long Island Sound Citizens Advisory Committee to develop an educated population that is aware of significant environmental problems and understands the management approach to, and their role in, correcting problems.

As one of 28 National Estuaries, this program was included in OMB's PART assessment under Ocean, Coastal, and Estuary Protection, completed in 2005 and was rated "adequate."

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce point source nitrogen discharges to Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL).			37,323	34,898	Trade Eq Lbs/Day

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Restore or protect acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands.			862	912	Acres

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reopen miles of river and stream corridor to anadromous fish passage through removal of dams and barriers or installation of by-pass structures such as fishways.			105.9	114	Miles

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$4,455.0) This total is the net of the 1.56% rescission and reduces congressionally directed funding in the FY 2008 Omnibus for the Long Island Sound. This will return support for implementation of the Long Island Sound Comprehensive Conservation and Management Plan, including addressing high nutrient loadings and protection and restoration of coastal habitats, to the baseline level.

Statutory Authority:

Long Island Sound Restoration Act, P.L. 106-457 as amended by P.L. 109-137; 33 U.S.C. 1269.

Geographic Program: Gulf of Mexico
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,407.4***	***$4,457.0***	***$5,618.0***	***$4,578.0***	***($1,040.0)***
Total Budget Authority / Obligations	$4,407.4	$4,457.0	$5,618.0	$4,578.0	($1,040.0)
Total Workyears	11.7	14.0	14.0	14.0	0.0

Program Project Description:

EPA's efforts in the Gulf of Mexico directly support a collaborative, multi-organizational Gulf states-led partnership comprised of regional businesses and industries, agriculture, state and local governments, citizens, environmental and fishery interests, and numerous Federal departments and agencies. The Gulf of Mexico Program (http://www.epa.gov/gmpo) is designed to assist the Gulf states and stakeholders in developing a regional, ecosystem-based framework for restoring and protecting the Gulf of Mexico. In response to the U.S. Ocean Action Plan, thirteen Federal agencies have come together to form a Regional Partnership to provide support to the Gulf of Mexico Alliance, a partnership of the five Gulf states. The Gulf states have identified key priority coastal and ocean issues that are regionally significant and can be effectively addressed through cooperation at the local, state, and Federal levels.

The partnership has identified processes and financial authorities in order to leverage the resources needed to support the *Gulf of Mexico Governors' Action Plan,*[28] and building on the success of this first Action Plan, the Alliance will expand the breadth and scope of Gulf of Mexico regional activities with the release of a Five-Year Regional Collaboration Blueprint. EPA supports this partnership's efforts to effectively address the complex and pressing issues facing the Gulf of Mexico.

FY 2009 Activities and Performance Plan:

The Gulf of Mexico's environmental issues can be broadly categorized as affecting water quality, public health, nutrient reductions, and coastal restoration and resiliency. Activities of the Gulf of Mexico Program and its partners include:

- Supporting efforts to achieve the FY 2009 target to restore 96 impaired segments in the 13 priority coastal areas to achieve water and habitat quality levels that meet state water quality standards;

[28] Available at: http://www.dep.state.fl.us/gulf/files/files/GulfActionPlan_Final.pdf.

- Supporting projects with the goal of creating, restoring or protecting 20,600 acres of important coastal and marine habitats in the Gulf of Mexico and addressing coastal community resiliency;

- Supporting state and coastal community efforts to manage Harmful Algal Blooms (HABs) by implementing an integrated bi-national early-warning system pilot project in Veracruz, Mexico, to be operational in 2008 with a 36-month period of performance for evaluation;

- Assisting the Gulf states in reducing contamination of seafood and local beaches through efforts to establish effective microbial source tracking methods and technologies to identify the sources of bacteria. This is imperative for developing best management practices to control fecal contamination, protect recreational water users from waterborne pathogens, and preserve the integrity of drinking source water supplies;

- Assisting in consumer awareness/educational efforts to reduce the rate of shellfish-borne *Vibrio vulnificus* illnesses caused by consumption of commercially-harvested raw or undercooked oysters;

- Establishing the Gulf States Alliance Monitoring Initiative as a model regional Coastal Water Quality Monitoring Framework pilot;

- Supporting coastal nutrient criteria and standards development with a Gulf State pilot;

- Supporting efforts to reduce nutrient loadings to watersheds and reduce the size of the hypoxic zone by identifying the top 100 nutrient-contributing watersheds in the Mississippi River Basin and using the U.S. Geological Survey SPARROW (SPAtially Referenced Regressions on Watershed attributes) model to indicate where the major sources of nitrogen and phosphorus are located and where to target reduction efforts;

- Establishing public and private support for the development and deployment of the Gulf Coastal Ecosystem Learning Centers Rotational Educational Exhibits Initiative; and

- Fostering regional stewardship and awareness of Gulf coastal resources through annual Gulf Guardian Awards; developing a Public Awareness Campaign; and projects enhancing local capacity to reach underserved and underrepresented populations.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal			64	96	Impaired Segments

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	areas (cumulative starting in FY 07).					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.			18,200	20,600	Acres

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.	2.4	2.4	2.5	2.5	Scale

A major indication of improvement in the overall health of the entire Gulf of Mexico is the score received in the National Coastal Condition Report Index. The score for the Gulf of Mexico in the 2001 Report was 1.9 on a 5 point system where 1 is poor and 5 is good. The score reported in the 2005 Report improved to 2.4.

This score does not include the impact of the hypoxic zone (low oxygen) in offshore Gulf Coast waters. The National Coastal Condition score includes indicators used to calculate regional, ecosystem-wide characterizations that include all primary estuaries. The hypoxic zone is a site specific, not regional indicator of dissolved oxygen. The coast-wide extent of the hypoxic zone mapped in 2007 was 20,500 square kilometers (7,900 square miles). The low oxygen waters extended from near the Mississippi River across the Louisiana/Texas border towards Galveston. The long-term average since mapping began in 1985 is 13,500 square kilometers (5,200 square miles). The target by 2015 is to reduce the zone to less than 5,000 square kilometers.

The Mississippi River Basin, which drains more than 41 percent of the continental U.S., accounts for the bulk of the nonpoint nutrient inputs to the Gulf of Mexico. Reduction in the amount of nutrients from this source is a critical management objective that requires implementation coordination among the many state and Federal partners in the Mississippi River Basin.

This program has not been reviewed under the PART process.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$7.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-$1,033.0) This total is the net of the 1.56% rescission and a reduction of congressionally directed funding in the FY 2008 Omnibus for the Gulf of Mexico. The additional FY 2008 resources will allow the Agency to complete implementation of the Gulf of Mexico Governors' Action Plan Phase I priority issues addressing water quality. The funds will allow the Agency to begin implementation of a Phase II five-year regional action plan on an accelerated schedule.

Statutory Authority:

CWA.

Geographic Program: Lake Champlain
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$997.0***	***$934.0***	***$2,707.0***	***$934.0***	***($1,773.0)***
Total Budget Authority / Obligations	$997.0	$934.0	$2,707.0	$934.0	($1,773.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Lake Champlain was designated a resource of national significance by the Lake Champlain Special Designation Act (Public Law 101-596) that was signed into law on November 5, 1990. A plan, "Opportunities for Action," was developed to achieve the goal of the Act: to bring together people with diverse interests in the Lake to create a comprehensive pollution prevention, control, and restoration plan for protecting the future of the Lake Champlain Basin. EPA's efforts to protect Lake Champlain support the successful interstate, interagency, and international partnership undertaking the implementation of the Plan. "Opportunities for Action" is designed to address various threats to the Lake's water quality, including phosphorus loadings, invasive species, and toxic substances.

(See http://www.epa.gov/NE/eco/lakechamplain/index.html, http://www.lcbp.org, and http://nh.water.usgs.gov/champlain_feds/ for more information.)

FY 2009 Activities and Performance Plan:

EPA works with state and local partners to protect and improve the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources. FY 2009 activities include:

- Addressing high levels of phosphorous, which encourages algal blooms in parts of the lake, by working to help implement the joint Vermont and New York Lake Champlain TMDL to reduce phosphorus loads from all categories of sources (point, urban and agricultural nonpoint);

- Preventing the introduction of an invasive form of *Didymosphenia geminata* into the Lake Champlain basin from the neighboring Connecticut River watershed;

- Monitoring the population of alewives, a recent invasive species affecting Lake Champlain, as well as working to remove and/or prevent the entry or dispersal of this and other invasive plants, fish, and invertebrates in the basin;

- Completing development and beginning implementation of an ecological report card which tracks ecological status and restoration progress in the Lake Champlain Basin;

- Completing revisions to the Lake Champlain Basin Management Plan, including commemorating the quadricentennial and incorporating recent developments and ongoing work in the Basin;

- Implementing a revised long-term limnological monitoring program for Lake Champlain;

- Continuing work to understand the high seasonal concentrations of toxic cyanobacteria, particularly microcystin, in the northern reaches of Lake Champlain by monitoring the dynamics of its species composition, concentration, and toxicity levels; reporting on its potential health impacts; and providing necessary information to the health departments of New York and Vermont to close beaches, drinking water intakes, or take other actions as necessary.

Performance Targets:

Work under this program supports the Improve Water Quality on a Watershed Basis sub-objective and the Restore and Protect Critical Ecosystems objective. Currently, there are no performance measures for this specific program.

This program has not been reviewed under the PART process.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$1,773.0) This total is the net of the 1.56% rescission and reduces congressionally directed funding in the FY 2008 Omnibus for the Lake Champlain Basin. This will return support for implementation of the Lake Basin Plan, "Opportunities for Action," including monitoring and assessment, and addressing high nutrient levels and invasive species to the baseline level.

Statutory Authority:

1909 The Boundary Waters Treaty; 1990 Great Lakes Critical Programs Act; 2002 Great Lakes and Lake Champlain Act; CWA; North American Wetlands Conservation Act; U.S.-Canada Agreements; National Heritage Areas Act of 2006; Water Resources Development Act (WRDA) of 2000.

Geographic Program: Other
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities; Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$9,704.2***	***$8,575.0***	***$32,072.0***	***$7,715.0***	***($24,357.0)***
Total Budget Authority / Obligations	$9,704.2	$8,575.0	$32,072.0	$7,715.0	($24,357.0)
Total Workyears	5.9	12.4	12.4	12.4	0.0

Program Project Description:

EPA targets efforts to protect and restore various communities and ecosystems impacted by environmental problems. Under this program, the Agency works with communities to develop and implement community-based approaches to mitigate diffuse sources of pollution and cumulative risk for geographic areas. The Agency also fosters community efforts to build consensus and mobilize local resources to target highest risks.

The South Florida Program leads special initiatives and planning activities in the South Florida region, which includes the Everglades and Florida Keys coral reef ecosystem. In FY 2009 EPA will implement, coordinate and facilitate activities including the Clean Water Act (CWA) Section 404 Wetlands Protection Program, the Comprehensive Everglades Restoration Program (CERP), the Water Quality Protection Program for the Florida Keys National Marine Sanctuary (FKNMS), the Southeast Florida Coral Reef Initiative (SEFCRI) as directed by the U.S. Coral Reef Task Force, the Brownfields Program, and other programs.

The Northwest Forest Program supports interagency coordination, watershed assessment, conservation, and restoration efforts across five states in the Pacific Northwest. Key elements of the program include two collaborative, watershed-scale monitoring programs that help characterize watershed conditions across 70 million acres of Forest Service and Bureau of Land Management (BLM) administered lands in the northwest. In addition to providing status and trend information for aquatic and riparian habitats, the two monitoring programs help support adaptive management and state water quality/watershed health programs.

The Lake Pontchartrain Basin Restoration Program strives to restore the ecological health of the Basin by developing and funding restoration projects. It also supports related scientific and public education projects.

The Community Action for a Renewed Environment (CARE) program is a community-based, multi-media program designed to help local communities address the cumulative risk of toxics exposure. Through the CARE program, EPA provides technical support and funding to approximately 50 communities to help them build partnerships and use collaborative processes to

select and implement actions to improve community health and the environment. Much of the risk reduction comes through the application of over 40 EPA voluntary programs designed to address community concerns such as Diesel Retrofits, Brownfields, the National Estuary Program, Design for the Environment, Environmental Justice Revitalization Projects, Tools for Schools, and Regional Geographic Initiatives. The process funded by the CARE program assists communities in tailoring the application of these and other programs to meet their specific priority needs.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will protect and restore various communities and ecosystems impacted by diffuse sources of pollution. These community-based approaches will decrease the cumulative risk for geographic areas. In addition to the below activities, EPA will continue to focus on coastal ecosystems in FY 2009.

South Florida

In conducting special initiatives and planning activities, EPA is investing $2.1 million in the South Florida Program in FY 2009 for the following activities:

- Assist with coordinating and facilitating the ongoing implementation of the Water Quality Protection Program for the FKNMS, including management of long-term status and trends monitoring projects (water quality, coral reef, and seagrass) and the associated data management program.

- Conduct studies to determine cause and effect relationships among pollutants and biological resources, implement wastewater and storm water master plans, and provide public education and outreach activities.

- Provide monetary and/or technical/managerial support for priority environmental projects and programs in South Florida, including:
  - Southeast Florida Coral Reef Initiative;
  - Water Quality Protection Strategy for the South Florida Ecosystem;
  - Integrated Mercury Study; and
  - REMAP Monitoring Program (to assess ecosystem characteristics and conditions throughout the Everglades ecosystem).

- Implement the Wetlands Conservation, Permitting, and Mitigation Strategy.

- Support collaborative efforts through interagency workgroups/committees/task forces, including: South Florida Ecosystem Restoration Task Force; Florida Bay Program Management Committee; U.S. Army Corps of Engineers; and South Florida Urban Initiative.

- Assist with development of Total Maximum Daily Loads (TMDLs) for South Florida.

- Assist with development of and tracking NPDES and other permits including discharge limits that are consistent with state and Federal law, and Federal Court consent decrees.

In FY 2009, EPA will continue to focus on the strategic targets in the 2006-2011 Strategic that address important environmental markers such as stony coral cover, health and functionality of seagrass beds, water quality in the FKNMS, phosphorus levels throughout the Everglades Protection Area, and effluent limits for all discharges, including storm water treatment areas.

Northwest Forest

Federal and state partners implement shared responsibilities for aquatic monitoring and watershed assessment. Efforts include refinement and utilization of monitoring approaches and modeling tools and increased integration of monitoring framework designs, monitoring protocols, and watershed health indicators. In FY 2009, EPA will invest $1.1 million in the Northwest Forest Program for the following activities:

- Complete on-the-ground stream reach and watershed condition/trend monitoring in 75 to 100 sub-watersheds in California, Oregon, Idaho, Montana, and Washington.

- Utilize remote sensing and GIS data layers to assess watershed conditions in over 1,000 watersheds in western Oregon and Washington, and in Northern California.

- Provide monitoring information to states to assist in CWA reporting and 303(d)-related efforts.

- Utilize upslope analysis, in-channel assessments, emerging research, and decision support models to inform management decisions and refine future monitoring efforts.

Lake Pontchartrain

The program will work to restore the ecological health of the Lake Pontchartrain Basin. In FY 2009, EPA will invest $978 thousand in the Lake Pontchartrain Basin Program for the following activities:

- Completing plans and studies as identified in the Lake Pontchartrain Basin Program Comprehensive Management Plan (LPBCMP) which supports the following goals:
  - Planning and design of consolidated wastewater treatment systems which support the Agency's Sustainable Infrastructure goal;
  - Repair and replacement studies to improve existing wastewater systems; and
  - Design of storm water management systems.

- Conducting outreach and public education projects that address the goals of the LPBCMP, such as:
  - Improving the management of animal waste lagoons by educating and assisting the agricultural community on lagoon maintenance techniques; and
  - Protecting and restoring critical habitats and encouraging sustainable growth by providing information and guidance on habitat protection and green development techniques.

CARE

With a FY 2009 investment of $2.4 million in the CARE Program, EPA will continue to provide technical support for communities, help them use collaborative processes to select and implement local actions, and award Federal funding for projects to reduce exposure to toxic pollutants. CARE uses two sets of cooperative agreements. In the smaller Level I agreements, the community, working with EPA, creates a collaborative problem-solving group of community stakeholders. That group assesses the community's toxic exposure problems and priorities and begins to identify potential solutions. In the larger Level II agreements, the community, working with EPA, selects and funds projects that reduce risk and improve the environment in the community.

In FY 2009, the CARE Program will provide support to communities to help them understand and improve their local environments and health by:

- Selecting and awarding assistance agreements to community partnerships to improve local environments;

- Providing technical support and training to help CARE communities build partnerships, improve their understanding of environmental risks from all sources, set priorities, and take actions to reduce risks;

- Improving community access to EPA voluntary programs and helping communities utilize these programs to reduce risks;

- Implementing a Memorandum of Understanding with the Centers for Disease Control's Agency for Toxic Substances and Disease Registry to improve support for communities by coordinating the efforts of multiple Federal agencies working at the community level to improve environmental health; and

- Conducting outreach to share lessons learned by CARE communities and encouraging other communities to build partnerships and take actions to reduce risks.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of population in each of U.S. Pacific Island Territories served by CWS will receive drinking water that meets all applicable health-based drinking water standards throughout the year.			72	72	Percent Population

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming.			70	86	Percent Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of the time that the sewage treatment plants in the U.S. Pacific Island Territories will comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS).			67	64	Percent Time

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Achieve "no net loss" of stony coral cover in FL Keys Nat'l Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, FL working with all stakeholders.			6.8/5.9	No Net Loss	Mean Percent Area

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Maintain the overall water quality of the near shore and coastal waters of the Florida Keys Nat'l			Maintain	Maintain	Sea Grass Health

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	Marine Sanctuary (FKNMS).					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 ppb total phosphorus criterion throughout the Everglades Protection Area marsh.			Maintain	Maintain	Parts per Billion

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$56.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$946.0) This reduction to the CARE program will decrease the number of grants from approximately 20 to approximately 12. The decrease will target Level I grants to ensure that funds are available for the existing CARE communities eligible for the larger Level II grants to reduce risks at the community level.
- (-$4,922.0) This reduces congressionally directed funding in the FY 2008 Omnibus for the San Francisco Bay.
- (-$18,688.0) This reduces congressionally directed funding in the FY 2008 Omnibus for Puget Sound activities.
- (+$143.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Florida Keys National Marine Sanctuary and Protection Act of 1990; National Marine Sanctuaries Program Amendments Act of 1992; CWA; Water Resources Development Act of 1996; Water Resources Development Act of 2000; RCRA; CERCLA; Economy Act of 1932; Intergovernmental Cooperation Act; CAA; SWDA; TSCA.

Regional Geographic Initiatives
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$6,302.5***	***$9,553.0***	***$0.0***	***$4,844.0***	***$4,844.0***
Total Budget Authority / Obligations	$6,302.5	$9,553.0	$0.0	$4,844.0	$4,844.0
Total Workyears	14.4	17.3	0.0	17.3	17.3

Program Project Description:

EPA uses Regional Geographic Initiative (RGI) funds to support innovative, geographically-based projects. These funds are available to EPA Regional offices to support priority local and regional environmental projects, which may include protecting children's health, restoring watersheds, providing for clean air, preventing pollution and fostering environmental stewardship. RGI provides an essential tool to facilitate holistic, innovative solutions to complex environmental problems. RGI is one of EPA's premiere innovation resources -- spurring local projects that have often become national models. Examples are school bus diesel retrofits, watershed planning, and developing agricultural pollution prevention performance standards for pest management.

RGI projects are chosen based on national criteria that support EPA's goals and priorities. These criteria state that RGI projects: address places, sectors or innovative projects; are based on a regional, state, tribal or other strategic plan; address problems that are multi-media in nature; fill a critical gap in the protection of human health and the environment; demonstrate state, local and/or other stakeholder participation; and/or identify opportunities for leveraging other sources of funding. Each Region administers RGI funds and has the discretion to set Regional specific criteria in addition to the national criteria. If the regional offices decide to apply additional criteria they are related to Regional, state, and/or local priorities or initiatives. RGI funds support Regional priorities through contracts, grants, inter-agency agreements, and cooperative agreements.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA Regional Offices plan to support projects and initiatives that align with Goal 4 Healthy Communities and Ecosystem while achieving Regional specific strategic priorities/goals. The following is a snapshot of RGI projects planned:

- Promote collaborations and environmental stewardship to support national programs and initiatives. The New Jersey Passaic River is considered one of the most degraded rivers in the U.S. and is experiencing considerable population growth and development,

resulting in significant loss of floodplains, fish spawning habitat, benthic habitat, wetlands, and other valuable aquatic and terrestrial habitats. EPA, the Army Corps of Engineers, NOAA, US F&WS and the State of New Jersey are developing a comprehensive watershed-based plan to clean up contamination in the river, improve water quality, and restore the ecological health of the watershed. In FY 2009, Region 2 will use RGI funds to support this effort and leverage state and other federal funding for education and outreach to foster public environmental stewardship; for local habitat restoration projects; and to promote the application of sustainable tools and programs within the watershed.

- Incorporate multi-media approaches to environmental issues. Three quarters of California's dairy cows are in the San Joaquin Valley where they contribute greatly to some of the worst water and air pollution in the country. Past RGI projects supporting the Collaborative leveraged over $16 million seeking to manage manure to improve the quality of soil, manage nutrients and provide renewable energy, while developing technologies that reduce emissions of pollutants to air and water. In FY 2009, Region 9 will use RGI funding to pilot projects that combine multiple treatment processes such as energy production, dentrification and composting; reduce emissions of priority pollutants from dairies; excess nutrients and salts in water, and Volatile Organic Compounds (VOCs) and ammonia that are precursors to formation of ground-level ozone and particulate matter.

- Support emerging environmental issues. Region 5 will focus FY 2009 RGI funding on critical Homeland Security functions and will work with states to implement: (a) the Heartland Emergency Response Exchange (HERE) to enable the rapid, accurate and secure exchange of critical data for emergency planners and emergency responders to natural and man-made disasters. This will increase data availability and compatibility between EPA and its states across organizational lines and, (b) the Disaster Debris Recovery Network to ensure that each state has the capability to safely manage post-disaster waste disposal and increase recovery and recycling of debris. RGI funds will assist with planning and preparation for the management of debris. Key outputs will include: databases and maps of debris facilities and debris management contractors; preparing debris management contractors to effectively work with incident management teams and, providing assistance to states and tribes so that they can help local communities prepare debris management plans.

- Plan to fill critical gaps. Region 8 will use RGI to fund FY 2009 projects for: 1) mercury deposition studies to understand the fate and transport of mercury and its effect on aquatic resources and wildlife. The focus will be on a project in the Great Salt Lake as a key step to identify ecosystem protection measures, and regain full use of aquatic and wildlife resources dependent upon the lake; and 2) understanding the environmental impact of emerging energy technologies important to our nation's energy future. The Region plans to use funds to develop scientific information to support EPA's permitting decisions involving a new technology for uranium extraction. There is a national need for information on this technology as nuclear energy is expanding as part of our energy portfolio.

- Provide seed funding and leverage federal, state, public and private dollars that help accelerate the pace of environmental and public health protection. Region 1 will use RGI funds to support the Healthy Communities Grant Program, assisting communities to reduce environmental risks, protect and improve human health, and improve the quality of life in New England. Region 1 plans to fund projects that must: (1) Be located in and/or directly benefit one or more of four Target Investment Areas [Environmental Justice Areas of Potential Concern, Sensitive Populations (e.g. children, elderly, tribes and/or others at increased risk), Places with High Risk from Toxic Air Pollution, and/or Urban Areas (population of 35,000 or more)]; and (2) Identify measurable environmental and/or public health results in one or more Target Program Areas (Asthma, Capacity-Building on Environment and Public Health Issues, Clean Energy, Healthy Indoor/Outdoor Environments, Healthy Schools, Smart Growth, Urban Natural Resources and Open/Green Space). This approach ensures that RGI resources are invested wisely, use competition, are well leveraged, and achieve measurable environmental and public health results.

- Showcase innovative solutions. Region 7 plans to continue to support the satellite Environmental Finance Center (EFC) which provides small rural communities enhanced access to financial products and technical assistance in the area of sustainable infrastructure. Continuing support for the satellite EFC will increase the number of community systems that receive water that meets all applicable health-based drinking water standards through effective treatment and source water protection. In FY 2009, RGI money will support process improvements in the Region, including Kaizen process improvement events with states modeled after the successful 2007 Water Quality Standards Kaizen event. This effort resulted in a vastly improved, streamlined process with 48% fewer steps and improved working relationships between Region 7 and its states.

- Support Regional specific priorities. Region 10's Strategic Endeavor addresses the program "Clean, Affordable Energy and Climate Change;" important regional priorities will use RGI to fund projects meeting one or more of the following objectives: 1) promote the availability of renewable energy; 2) promote the efficient use of existing energy sources; or 3) sequester carbon. Region 6 will use RGI funds to further regional priorities and focus specific projects to: (a) fund a project with the City of Dallas to reduce vehicle emissions and help the area attain air quality standards; (b) pilot new strategies for cleaning up tire piles along the US/Mexican Border and reusing the waste tires; and (c) host workshops to bring together local governments to expand water conservation/efficiency measures. Region 3 will continue the Student Environmental Development Program in the District of Columbia and Philadelphia, PA and in support of the Administrator's initiative for the Minority Institutions Program; projects will be developed and funded for Lincoln University, University of Maryland - Eastern Shore, Hampton University, and Norfolk State University -- all Historically Black Colleges and Universities. Region 4 will use RGI funds that develop models and programs to address local problems and regional priorities. RGI projects will focus on the following anticipated results: 1) Strategic Agriculture: increase in growers using better waste

management practices, reducing exposure to contaminants, and conserving energy; and 2) Children's Health: reduction in chronic health disorders and reduced exposure to environmental contaminants.

Performance Targets:

Work under this program supports EPA's Objective 4.2: Communities. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,384.0 / +17.3 FTE) This reflects an increase for payroll and cost of living for all FTE. Congress eliminated this program in FY 2008.

- (+$2,460.0) This increase reflects partial restoration of this program at a funding level that recognizes the integration of Regional Geographic program efforts into other existing Regional and state programs throughout the Agency. This total is net of the FY 2008 Omnibus 1.56% rescission.

Statutory Authority:

CWA; CAA; TSCA; CERCLA; SDWA; PPA; RCRA.

Program Area: Homeland Security

Homeland Security: Communication and Information

Program Area: Homeland Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$8,119.0***	***$6,906.0***	***$6,822.0***	***$6,940.0***	***$118.0***
Hazardous Substance Superfund	$300.0	$0.0	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$8,419.0	$6,906.0	$6,822.0	$6,940.0	$118.0
Total Workyears	13.0	17.0	17.0	17.0	0.0

Program Project Description:

This program designs, develops, deploys, and maintains a secure and stable infrastructure to support the Agency's critical communications and data-transfer demands in the event of a national or local disaster. This infrastructure provides rapid access to communication tools, accelerated transfers of data, models and maps to support response activities (e.g., plume models and maps to determine the extent of contamination) and enhance staff access to all EPA data and web resources. This program also supports a dispersed workforce in the event of a large-scale catastrophic incident, a Continuity of Operations (COOP) Plan, or pandemic situation and enables the upgrading and standardization of technology, with particular emphasis on the Internet Protocol Version 6 (IPv6) infrastructure. This program also enables video contact between localities, headquarters, Regional offices, and laboratories in emergency situations.

The Homeland Security Presidential Directives (HSPDs), the Homeland Security Strategy, and use of an Agency-wide Homeland Security Collaborative Network (HSCN) support the Agency's ability to effectively implement its broad range of homeland security responsibilities, ensure consistent development and implementation of homeland security policies and procedures, avoid duplication, and build a network of partners so that EPA's homeland security efforts are integrated into Federal homeland security efforts. This program also serves to capitalize on the concept of "dual-benefits" so that EPA's homeland security efforts enhance and are integrated into EPA core environmental programs that serve to protect human health and the environment. Homeland Security information technology efforts are closely coordinated with the Agency-wide Information Security and Infrastructure activities, which are managed in the Information Security and IT/Data Management programs.

FY 2009 Activities and Performance Plan:

EPA will coordinate with the U.S. Intelligence Community, including the Office of the Director for National Intelligence, the Department of Homeland Security, the Central Intelligence Agency, the National Security Agency, the Federal Bureau of Investigation, the Department of Defense, and the White House Homeland Security Council. EPA will ensure that interagency intelligence-related planning and operational requirements are met. EPA also will track emerging national/homeland security issues in order to anticipate and avoid crisis situations and target Agency efforts proactively against threats to the United States.

EPA's FY 2009 resources will support the Agency's rapid response infrastructure by delivering increased network capacity and expanding the Agency's bandwidth functions (e.g., Voice over IP) and other related IPv6 improvements. These capabilities will allow secure, reliable, and high-speed data access and communication to first responders, on-scene coordinators, emergency response teams, headquarters support teams, and investigators wherever they are located (regardless of what jurisdiction they operate under) and also will support EPA's Homeland Security Presidential Directive responsibilities.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$69.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$500.0) This reduction reflects completion of work associated with the LAN-in-a-Box initiative.
- (+$200.0) This increase supports the expansion of the emergency notification system through the purchase of necessary IT equipment for essential personnel.
- (+$349.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

NCP; CERCLA; SDWA; CWA; CAA; Bio Terrorism Act; Homeland Security Act of 2002; Defense Against Weapons of Mass Destruction Act (Title XIV of Public Law 104-201).

Homeland Security: Critical Infrastructure Protection
Program Area: Homeland Security
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

Goal: Clean and Safe Water
Objective(s): Protect Human Health

Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$9,555.5***	***$7,787.0***	***$7,665.0***	***$6,759.0***	***($906.0)***
Science & Technology	$10,575.4	$25,586.0	$15,357.0	$27,131.0	$11,774.0
Hazardous Substance Superfund	$1,637.2	$1,857.0	$1,828.0	$1,679.0	($149.0)
Total Budget Authority / Obligations	$21,768.1	$35,230.0	$24,850.0	$35,569.0	$10,719.0
Total Workyears	53.7	59.0	59.0	49.0	-10.0

Program Project Description:

This program involves several EPA activities that coordinate and support the protection of the nation's critical public infrastructure from terrorist threats. EPA activities support effective information sharing and dissemination to help protect critical water infrastructure. Support to state and local governments also helps develop methods to detect anomalies in ambient air. EPA also provides subject matter expertise in environmental criminal investigations and training support for terrorism-related investigations.

FY 2009 Activities and Performance Plan:

Water Security

In FY 2009, EPA will continue to build its capacity to identify and respond to threats to critical national water infrastructure. EPA's wastewater and drinking water security efforts will continue to support the implementation of information sharing tools and mechanisms to provide timely information on contaminant properties, water treatment effectiveness, detection technologies, analytical protocols, and laboratory capabilities for use in responding to a water contamination event. EPA will continue to support effective communication conduits to disseminate threat and incident information and to serve as a clearing-house for sensitive information. EPA promotes information sharing between the water sector and such groups as environmental professionals and scientists, law enforcement and public health agencies, the intelligence community, and technical assistance providers. Through such exchange, water systems can obtain up-to-date information on current technologies in water security, accurately

assess their vulnerabilities to terror acts, and work cooperatively with public health officials, first responders, and law enforcement officials to respond effectively in the event of an emergency.

EPA partners with the Water Information Sharing and Analysis Center (WaterISAC) to provide up-to-date security information for drinking water and wastewater utilities. This group is continuing to evaluate the potential for integration with the Department of Homeland Security's Homeland Security Information Network (HSIN), a new information sharing network offered to all critical infrastructure sectors, including all utilities within the water sector. In FY 2009, more than 11,000 distinct water sector organizations will receive notices and have access to WaterISAC designed to provide important and timely communication from the Federal government to water sector affiliates. In addition, more than 500 drinking water and wastewater utilities, representing 60% of the U.S. population, will rely on a secure and up-to-date web-based environment to share and receive security sensitive information as subscribers to WaterISAC.

The FY 2009 request level for WaterISAC is $2.6 million.

Counterterrorism

In FY 2009, EPA will continue to train all criminal investigators within the Office of Criminal Enforcement, Forensics and Training (OCEFT) in "Hot Zone Forensic Evidence Collection" typically utilized at crime scenes involving Weapons of Mass Destruction (WMD) as well as environmental crimes. The program will continue this multi-year effort to train and provide these agents with the necessary specialized response skills and evidence collection equipment. This will enable these agents to collect evidence and process a crime scene safely and effectively in a contaminated environment (hot zone). A new element will be added to this training in FY 2009. Personnel trained under this program will be incorporated into the Agency's Response Support Corps and will be utilized to supplement the Agency's critical infrastructure support missions as outlined in the various Emergency Support Functions of the National Response Framework (NRF).

Advanced crime scene processing training also will be provided to those criminal investigators assigned to the National Counter Terrorism Evidence Response Team (NCERT). NCERT will continue to provide environmental expertise for criminal cases and support the FBI and Department of Homeland Security (DHS) during select National Special Security Events (NSSE) and also will supply the required support as described in the various Emergency Support Functions (ESFs) of the National Response Plan (NRP) and National Response Framework (NRF) during a national emergency. Additionally, EPA agents in the homeland security program will provide more robust support, involving evidence collection, to the BioWatch, Water Security Initiative, and RadNet programs.

Monitoring

EPA will continue to provide support for infrastructure protection by assisting state and local governments to develop methods for detecting anomalies in ambient air. This includes the continued development of source-oriented, near-field modeling science and techniques to address direct releases or emissions of toxic and/or harmful air pollutants as well as the

development and improvements of multi-pollutant models to demonstrate effects of air threats to air quality. For monitoring, EPA will continue the testing and improvement of monitoring technologies and institutional infrastructure of the Federal, state and local ambient air monitoring networks and capabilities. EPA will provide technical assistance, as necessary, to respond to or be prepared for an air quality threat in the United States.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$79.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$540.0) This increase will fund specific skills trainings (e.g., ICS Group Supervisor, damage assessment, sanitary survey, etc.), exercises focusing on water security, and associated travel to support the Regions' emergency response duties as specified in DHS' National Response Framework.

- (-$1,647.0 / -9.0 FTE) This redirection will consolidate FTE for the Protection Services Detail with other Agency security resources in the Facilities Infrastructure and Operations program. In light of current requirements, the Agency will be able to continue to meet homeland security responsibilities for the enforcement program in FY 2009.

- (+$122.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

SDWA; CWA; Public Health Security and Bioterrorism Emergency and Response Act of 2002; EPCRA; CAA; RCRA; TSCA; Residential Lead-Based Paint Hazard Reduction Act; FIFRA; ODA; NEPA; North American Agreement on Environmental Cooperation; 1983 La Paz Agreement on U.S.- Mexico Border Region; Pollution Prosecution Act.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$3,394.3***	***$3,381.0***	***$3,329.0***	***$3,412.0***	***$83.0***
Science & Technology	$39,003.6	$40,768.0	$38,193.0	$46,210.0	$8,017.0
Hazardous Substance Superfund	$50,318.1	$45,280.0	$44,629.0	$56,676.0	$12,047.0
Total Budget Authority / Obligations	$92,716.0	$89,429.0	$86,151.0	$106,298.0	$20,147.0
Total Workyears	166.7	167.6	167.6	174.2	6.6

Program Project Description:

EPA plays a lead role in protecting U.S. citizens and the environment from the effects of attacks that release chemical, biological, and radiological agents. EPA's Homeland Security Emergency Preparedness and Response program develops and maintains an Agency-wide capability to prepare for and respond to large-scale catastrophic incidents with emphasis on those that may involve Weapons of Mass Destruction (WMD). EPA continues to increase the state of preparedness for homeland security incidents. The response to chemicals is different from the response to pests, but for both, the goals are to facilitate preparedness, safe response by first responders, safe re-occupancy of buildings or other locations and to protect the production of crops, livestock, and food in the U.S. In the case of chemicals, new information is needed to assist emergency planners and first responders in assessing immediate hazards, while clean-up methods are generally known due to long-standing chemical emergency preparedness work. EPA, working with other Federal and state agencies and industry, is addressing the need for readily available chemical pesticide products for decontamination of agricultural structures, crops, and livestock and food facilities.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will maintain the accelerated development of values for Acute Exposure Guideline Levels (AEGLs), which emergency planners and first responders use to prepare for and deal with chemical emergencies by determining safe exposure levels. Following September 11, 2001, the program was created to accelerate the development of proposed AEGL values, which are put to use immediately. Commencing in FY 2009, the program will shift emphasis towards elevating proposed AEGL values to Interim and ultimately Final status in conjunction with the National Academies of Science. Accordingly, in FY 2009, the program plans to develop proposed AEGL values for 18 additional chemicals, compared with 33 in FY 2007 and 23 in FY 2006, remaining on target to meet its long-term goal of developing proposed AEGL

values for 287 chemicals by 2011. In addition, final values will be completed for at least six additional chemicals in FY 2009. For more information, please visit www.epa.gov/oppt/aegl.

Performance Targets:

Work under this program supports EPA's Healthy Communities objective. A performance measure tracking development of proposed AEGL values are included in the Chemical Risk Review and Reduction program project. The AEGL program has consistently achieved or exceeded its performance targets, reflecting significantly greater than expected progress in developing proposed AEGL values due in part to unanticipated opportunities to develop values for categories of similar chemicals. The program significantly exceeded its FY 2007 annual performance target of 24 additional chemicals with proposed AEGL values by completing that work for 33 chemicals, due in part to delays in FY 2006 pending resolution of issues surrounding the use of data from human studies. Cumulative results demonstrate a total of 218 proposed AEGLs completed indicating significant progress towards completing 287 chemicals by 2011. For more information, please visit www.epa.gov/oppt.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$15.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$68.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Public Health Security and Bioterrorism Emergency and Response Act of 2002; CERCLA; SARA; TSCA; Oil Pollution Act; Pollution Prevention Act; RCRA; EPCRA; SDWA; CWA; CAA; FIFRA; FFDCA; FQPA; Ocean Dumping Act; Public Health Service Act, as amended; 42 U.S.C. 201 et seq.; Executive Order 10831 (1970); Public Law 86-373; PRIA.

Homeland Security: Protection of EPA Personnel and Infrastructure

Program Area: Homeland Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$6,219.1***	***$6,345.0***	***$6,248.0***	***$6,415.0***	***$167.0***
Science & Technology	$2,023.9	$594.0	$585.0	$594.0	$9.0
Building and Facilities	$10,372.2	$7,870.0	$7,747.0	$8,070.0	$323.0
Hazardous Substance Superfund	$636.7	$594.0	$585.0	$1,194.0	$609.0
Total Budget Authority / Obligations	$19,251.9	$15,403.0	$15,165.0	$16,273.0	$1,108.0
Total Workyears	2.3	3.0	3.0	3.0	0.0

Program Project Description:

This Homeland Security Program ensures the protection of EPA staff and physical buildings. It is comprised of three distinct elements: (1) Physical Security - ensuring EPA's physical structures and critical assets are secure and operational with adequate security procedures in place to safeguard staff in the event of an emergency; (2) Personnel Security - initiating and adjudicating personnel security investigations; and (3) National Security Information - classifying and safeguarding sensitive mission critical data.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will focus on meeting the mandates contained in Homeland Security Presidential Directive 12 (HSPD-12). HSPD-12 requires Federal Agencies to issue secure and reliable identification to all employees and contractors. Federal Information Processing Standard (FIPS) 201-1, Personal Identity Verification (PIV) of Federal Employees and Contractors, issued by the National Institute of Standards and Technology (NIST), establishes the technical specifications for the smart cards that respond to this requirement. Additionally, EPA will continue its physical security activities on a regular basis, including conducting security vulnerability assessments and mitigation at EPA's facilities nationwide.

Personnel security will play a major role in the Agency's new EPA Personnel Access Security System (EPASS) deployment. Concurrent with new EPASS responsibilities, the personnel security program will continue to perform position risk designations; prescreen prospective new

hires; process national security clearances; and maintain personnel security files and information on more than 26,000 employees and select non-Federal workers.

Regarding National security information, FY 2009 activities will include classifying, declassifying, and safeguarding classified information; identifying and marking of classified information; education, training, and outreach; audits and self inspections; and certification and accreditation of Secure Access Facilities (SAFs) and Sensitive Compartmented Information Facilities (SCIFs).

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$27.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$140.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

The National Security Strategy; Homeland Security Presidential Directives 3, 7, and 12; Intelligence Reform and Terrorism Prevention Act of 2004; Executive Orders 10450, 12958, and 12968; Title V CFR Parts 731 and 732.

Program Area: Indoor Air

Indoor Air: Radon Program
Program Area: Indoor Air
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Indoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$5,201.2***	***$5,429.0***	***$5,363.0***	***$5,488.0***	***$125.0***
Science & Technology	$434.1	$428.0	$422.0	$441.0	$19.0
Total Budget Authority / Obligations	$5,635.3	$5,857.0	$5,785.0	$5,929.0	$144.0
Total Workyears	37.0	39.9	39.9	39.4	-0.5

Program Project Description:

EPA's non-regulatory indoor radon program promotes voluntary public action to reduce health risk from indoor radon (second only to smoking as a cause of lung cancer). EPA and the Surgeon General recommend that people do a simple home test and, if levels above EPA's guidelines are confirmed, reduce those levels by home mitigation using inexpensive and proven techniques. EPA also recommends that new homes be built using radon-resistant features in areas where there is elevated radon. This voluntary program includes national, Regional, state, and Tribal programs and activities that promote radon risk reduction activities.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will:

- Continue to partner with national organizations and conduct public outreach on radon risks and solutions;
- Work with states, tribes, and localities to improve their radon programs to increase risk reduction;
- Continue partnerships that will make radon risk reduction a normal part of doing business in the marketplace; and
- Expand scientific knowledge and technologies to support and drive aggressive action on radon in conjunction with partners.

In FY 2009, EPA will continue to promote public action to test homes for indoor radon. Where levels are above the action level, the Agency will continue to: a) encourage builders to construct new homes with radon-resistant features in areas where there is elevated radon and b) encourage radon action during real estate transactions.

EPA also will continue its work with national partners to inform and motivate public action. The outreach will include risk estimates from the National Academy of Sciences that demonstrate substantial risks associated with radon exposure.

The Indoor Air program received a rating of "moderately effective" during a 2005 PART assessment. The Indoor Air program is not regulatory; instead, EPA works toward its goal by conducting research and promoting appropriate risk reduction actions through voluntary education and outreach programs. The Agency will continue to focus on making efficiency improvements and plans to improve transparency by making state radon grantee performance data available to the public via a website or other easily accessible means.

The majority of Federal resources directed to radon risk reduction are allotted to states under the State Indoor Radon Grants program. EPA strategically employs its programmatic resources to underwrite its national leadership of the Federal/state/private coalition attacking national radon risk. EPA targets its efforts to public outreach and education activities designed to increase the public-health effectiveness of state and private efforts. This includes support for national public information campaigns that attract millions of dollars in donated air time, identification and dissemination of "best practices" from the highest achieving states for transfer across the nation, public support for local and state adoption of radon prevention standards in building codes, coordination of national voluntary standards (e.g., mitigation and construction protocols) for adoption by states and the radon industry, and numerous other activities strategically selected to promote individual action to test and mitigate homes and promote radon-resistant new construction.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	late 2008	190,000	225,000	265,000	Homes

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Total Cost (public and private) per future premature cancer death prevented through lowered radon exposure.		No Target Established	No Target Established	415,000	Dollars

Program goals are the result of the total funding the program area receives through EPM, S&T, and State Indoor Radon Grant (SIRG) funding.

In FY 2009, EPA's goal is to add 265,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over 2 million. EPA estimates that this cumulative number will prevent approximately 875 future premature cancer deaths (each year these radon reducing features are in place). EPA will track progress against the efficiency measure, in the table above, triennially with the next report date in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$111.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$14.0) This reflects an increase for IT and telecommunications resources.
- (-0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

CAA Amendments of 1990; IRAA, Section 306; Radon Gas and Indoor Air Quality Research Act; Title IV of the SARA of 1986; TSCA, section 6, Titles II, and Title III (15 U.S.C. 2605 and 2641-2671), and Section 10.

Reduce Risks from Indoor Air
Program Area: Indoor Air
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Indoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$21,425.6***	***$21,440.0***	***$21,632.0***	***$19,180.0***	***($2,452.0)***
Science & Technology	$791.2	$788.0	$777.0	$790.0	$13.0
Total Budget Authority / Obligations	$22,216.8	$22,228.0	$22,409.0	$19,970.0	($2,439.0)
Total Workyears	64.7	68.3	68.3	63.8	-4.5

Program Project Description:

In this non-regulatory, voluntary program, EPA works through partnerships with non-governmental organizations and Federal partners as well as professional organizations to educate and encourage individuals, schools, industry, the health care community, and others to take action to reduce health risks from poor indoor air quality. Air inside homes, schools, and workplaces can be more polluted than outdoor air in the largest and most industrialized cities. (U.S. EPA. 1987. *The Total Exposure Assessment Methodology (TEAM) Study: Summary and Analysis Volume I.* EPA 600-6-87-002a. Washington, DC: Government Printing Office.) People typically spend close to 90 percent of their time indoors and may be more at risk from indoor than outdoor air pollution. (U.S. EPA. 1989. *Report to Congress on Indoor Air Quality, Volume II: Assessment and Control of Indoor Air Pollution.* EPA 40-6-89-001C. Washington, DC: Government Printing Office.)

Additionally, EPA uses technology transfer to improve the design, operation, and maintenance of buildings – including schools, homes, and workplaces – to promote healthier indoor air. EPA provides technical assistance that directly supports state, local governments and public health organizations.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to promote community adoption of comprehensive asthma-care programs that emphasize management of environmental asthma triggers, such as environmental tobacco smoke, dust mites, mold, pet dander, cockroaches and other pests, and nitrogen dioxide. Working principally with Federal and non-profit partners, and continue to reach populations disproportionately impacted by asthma and environmental tobacco smoke.

EPA will work in partnership and collaboration with other Federal agencies, the health care community, and state and local organizations to promote its Smoke-free Homes Pledge Campaign.

EPA will continue to work with the health care provider community to integrate environmental asthma management into the standards of care for asthma.

Through its remaining partnership agreements, EPA will continue to reach out to the school community to encourage adoption of the Indoor Air Quality Tools for Schools (IAQ TfS) approach or comparable indoor air quality programs. For new construction and renovation, EPA will promote Design Tools for Schools (DTfS)29 a web-based guidance tool, as well as EPA's Healthy School Environments Assessment Tool (HealthySEAT) which assists school districts in integrating indoor air quality and performance goals into the design, construction, and renovation of school buildings. EPA uses partnerships to inform and motivate school officials, school nurses, teachers, facility managers and planners, and parents to improve indoor air quality (IAQ) in schools.

EPA also will promote a suite of "best practice" guidance, including guidance for the control and management of moisture and mold in commercial and public buildings, comprehensive best practice guidance for IAQ during each phase of the building cycle, and subsequent best maintenance practices for indoor environmental quality and energy efficiency, due to ongoing increased growth in allergy rates.

Internationally, EPA will continue to work to provide technology transfer to developing countries so that individuals and organizations within those countries have the tools to address human health risk due to indoor smoke from cooking fires. Since 2003, the indoor air program has helped 1.4 million households across the globe—an estimated 8 million people—adopt clean and efficient cooking technologies.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average cost to EPA per student per year in a school that is implementing an Indoor Air Quality plan.		No Target Estab-lished	No Target Estab-lished	1.40	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	Data Avail 2008	1100	1100	1000	Number

[29] www.epa.gov/iaq/schooldesign last accessed 7/23/2007.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Annual Cost to EPA per person with asthma taking all essential actions to reduce exposure to indoor environmental asthma triggers.		No Target Estab-lished	No Target Estab-lished	3.90	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	Data Avail 2008	2000	2000	2000	Number

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of public that is aware of the asthma program's media campaign.	Data Avail 2008	>20	>20	>20	Percen-tage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Total number of schools implementing an effective indoor air quality plan.		No Target Estab-lished	No Target Estab-lished	37,000	Number

EPA will continue to work under its long term 2012 goal to have 6.5 million people with asthma take the essential actions to reduce their exposure to environmental triggers. EPA's goal has been to motivate close to 400,000 additional people with asthma to take these actions in 2009, bringing the total number to approximately 5.3 million people with asthma taking these actions. EPA will work at a more measured pace to reduce existing disparities between disproportionately impacted populations and the overall population. EPA will also continue to work toward its long term 2012 goal that 40,000 primary and secondary schools (35% of schools) will be implementing effective indoor air quality management programs consistent with EPA guidance.

The Indoor Air program, rated by OMB as "moderately effective" during a 2005 PART

assessment will continue to focus on making efficiency improvements in response to recommendations in the PART assessment. EPA will track progress against the efficiency measures included in the tables above triennially with the next planned report date in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$2,086.0/ -4.5 FTE) This decrease reflects a shift away from activities in the asthma program such as incorporating management of environmental triggers into national clinical practice and standards of care for health plans and health care providers as well as training and education of asthma care providers on the environmental management of these triggers. EPA will focus its efforts more narrowly to reach populations disproportionally impacted by asthma and environmental tobacco smoke.

- (-$366.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

Statutory Authority:

CAA Amendments of 1990; Title IV of the SARA of 1986.

Program Area: Information Exchange / Outreach

Children and Other Sensitive Populations: Agency Coordination

Program Area: Information Exchange / Outreach
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,968.5***	***$6,203.0***	***$6,144.0***	***$6,309.0***	***$165.0***
Total Budget Authority / Obligations	$4,968.5	$6,203.0	$6,144.0	$6,309.0	$165.0
Total Workyears	12.6	13.9	11.9	13.9	2.0

Program Project Description:

The Child and Aging Health Protection program advocates for and facilitates the consideration of children's environmental health concerns, as identified in the Agency's *National Agenda to Protect Children's Health from Environmental Threats,* and Executive Order 13045, *Protection of Children's Health from Environmental Health Risks and Safety Risks.* EPA also recognizes that older adults are more susceptible to environmental health risks than the general population. EPA's Aging Initiative strives to protect the health of older adults. This cross-cutting, non-regulatory program works with other EPA offices, Federal agencies, states, Tribes, the public, healthcare providers, industry, and non-governmental organizations to achieve its mission. Core activities focus on building capacity, providing tools and information to inform decisions, and engaging in educational outreach activities.[30]

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will fund the Office of Children's Health Protection at $6,309 thousand with 13.9 FTE under this program. The Office of Environmental Education has been eliminated with no funding given in FY 2009. The Child and Aging Health Protection program will ensure that EPA's policies and programs explicitly consider and use the most up-to-date data and methods for protecting children and older adults from heightened public health risks. EPA also will work with states, Tribes, and local governments to effectively incorporate environmental health considerations of children and older adults into new or existing programs; and will ensure that non-governmental organizations and the public (family members, health care providers, community leaders, etc.) have and use reliable/valid scientific information when making decisions that impact the health of children and older adults. The following are examples of current and planned activities:

- Work with other Agency offices to implement the *Guide to Considering Children's Health When Developing EPA Actions* and assist in assessing children's health risks as

[30] Please refer to: http://yosemite.epa.gov/ochp/ochpweb.nsf/content/homepage.htm.

part of EPA's rule making activities and evaluating the application of such guidance throughout EPA.

- Work within EPA to generate and apply new scientific research, tools and assessments, and promote easy access to information regarding children's environmental health. Support efforts within the Agency's Regional offices to address children's environmental health issues that are of high priority in their states.

- Provide tools, information, and support to build capacity in states, tribes, and local governments to protect children from environmental health risks. Support the Healthy Schools Environmental Health Assessment Tool.

- Support partners outside of the Agency to ensure healthcare providers, civic entities, and the public have access to tools and information needed to protect children and older adults from environmental health risks. EPA also helps provide health professionals and the public with consultation, education, and referral services through its support for Pediatric Environmental Health Specialty Units.

- Support the Prevention, Pesticides and Toxic Substances program's implementation of a comprehensive program to address hazards created by renovating, repairing, and painting homes that have lead-based paint, and a final regulation to address lead-safe work practices for renovation, repair, and painting activities.

Performance Targets:

Work under this program supports EPA's Objective 4.2: Communities. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$340.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$100.0) This change reflects a reduction in contract support for the Children's Health Protection Advisory Committee (CHPAC) through more efficient use of technology.

- (-$38.0) The Agency is not funding the increase directed by Congress for this program restoration in FY 2008.

- (-$37.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (+2.0 FTE) Congress requested that the Agency provide staff and funding and reflects consolidation of the Environmental Education activities with the Children's' office in FY 2008. This change represents the return of FTEs that were supplied for this program as a

consequence of the Congressional request. The Agency is not requesting funding in FY 2009 for the Environmental Education Division within the Office of the Administrator.

Statutory Authority:

Executive Order 13045.

Environmental Education

Program Area: Information Exchange / Outreach
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance; Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$7,807.2***	***$0.0***	***$8,860.0***	***$0.0***	***($8,860.0)***
Total Budget Authority / Obligations	$7,807.2	$0.0	$8,860.0	$0.0	($8,860.0)
Total Workyears	16.0	0.0	19.6	0.0	-19.6

Program Project Description:

The Environmental Education Program provides leadership resources to educational organizations at the local, state, and national levels to enable them to conduct educational initiatives concerning protection of the environment. The primary audience is composed of teachers, students, and non-formal educators in parks, zoos, and museums. Environmental education projects use sound science to educate our citizens about the need for responsible stewardship to preserve and protect the environment.[31]

FY 2009 Activities and Performance Plan:

EPA believes that environmental education is an integral part of all its programs. This, when coupled with the fact that many states, local governments and private organizations have developed their own environmental education programs, supports the elimination of funding for this particular program project.

Performance Targets:

Measure Type	Measure	FY 2007 Target	FY 2007 Actual	FY 2008 Target
Outcome	Percent of all students and teachers reached demonstrate increased environmental knowledge, as measured by the Guidelines for Learning for K-12, developed by the North American Association for Environmental Education.		Data not yet available	Baseline data due in FY08
Output	Number of states adopting or aligning Guidelines for Learning		Data not yet available	Baseline data due in FY08

[31] For more information, please see www.epa.gov/enviroed

Measure Type	Measure	FY 2007 Target	FY 2007 Actual	FY 2008 Target
	curricula and standards to state academic standards or number of states developing new environmental education standards based on Guidelines for Learning.			
Outcome	Percent of college students who pursue environmental careers after receipt of NNEMS fellowship from EPA.	25	Data not yet available	To be determined
Efficiency	Ratio of number of students/teachers that have improved environmental knowledge per total dollars expended.		Data not yet available	Baseline data due in FY08

The Environmental Education program has received a "Results Not Demonstrated" rating. The program is now collecting baseline performance data for the measures noted below and anticipates reporting the initial results on the National Network for Environmental Management Studies (NNEMS) measure in calendar year 2008.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$8,860.0) This change represents the elimination of all funding for this program.

- (-19.6 FTE) Congress directed the Agency to provide staff and funding for Environmental Education in FY 2008. The Agency is not requesting funding in FY 2009 for Environmental Education. The FTE diverted for this are being returned to the programs where they were: Congressional, Intergovernmental, and External Relations program (+13.6 FTE); the Small Business Ombudsman program (+2.0 FTE); the Small Minority Business Assistance program (+2.0 FTE); and the Children's and other Sensitive Populations program (+2.0 FTE).

Statutory Authority:

National Environmental Education Act (PL 101-619).

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$49,193.3***	***$49,747.0***	***$48,971.0***	***$49,756.0***	***$785.0***
Hazardous Substance Superfund	$137.5	$155.0	$154.0	$0.0	($154.0)
Total Budget Authority / Obligations	$49,330.8	$49,902.0	$49,125.0	$49,756.0	$631.0
Total Workyears	375.7	379.1	365.5	372.4	6.9

Program Project Description:

The Congressional, Intergovernmental and External Relations program furnishes the resources for those headquarters and Regional offices that provide the vision, leadership, and support needed to enable EPA to meet its commitments to protect human health and the environment. This program provides the resources for the offices of the Regional Administrators as well as Regional Congressional and Legislative Support and Public Affairs. EPA's Congressional and Intergovernmental Relations function provides resources to respond to Congressional requests for information and provide written and oral testimony, briefings, and briefing materials. The Office provides national support to the Regional Geographic Initiatives Program and the Regional Science and Technology Program.

FY 2009 Activities and Performance Plan:

In FY 2009, the Office of Congressional and Intergovernmental Relations will be funded at $7,192 thousand with 56.8 FTE. This Office develops legislative strategies to support program Offices and coordinates the Agency's appearances before Congress. EPA must work effectively with states, local, and Tribal governments, and other external constituencies, to ensure that their interests and concerns are considered in Agency policies, guidance, and regulations. In FY 2009, the Office of Cooperative Environmental Management (OCEM) under this program will be funded at $1,987 thousand with 11.1 FTE. This office provides resources to develop and manage Agency-wide FACA policy and guidance. OCEM also has direct management responsibility for four FACA committees.

EPA will continue to ensure that its Federal advisory committees comply with requirements and administrative guidelines provided by the General Services Administration's Committee Management Secretariat. Key activities include:

- Ensuring that EPA's Federal advisory committees comply with FACA requirements through a comprehensive committee management and review process.

- Providing EPA Regional managers with tools and opportunities to determine regional FACA priorities; better utilize existing EPA committees; and explore options for new committees and subcommittees.

- EPA also will ensure that all new or renewed FACA Charters include preliminary performance measures, and report results associated with the Agency's committee management process.

Further, in order to help EPA build a more positive and proactive relationship with the agricultural industry, and to build partnerships to find better, more efficient ways to protect human health and the environment, the Agency will launch a Farm, Ranch, and Rural Communities FACA. This committee will provide advice and recommendations to the Administrator on critical environmental issues involving agriculture.

The Immediate Office of the Administrator is funded at $5,037 thousand and 34.8 FTE. This office within the Congressional, Intergovernmental and External Relations program supports the achievement of the Agency's strategic goals by communicating Agency proposals, actions, policy, data, research, and information through mass media, print publications, and directly via the Web.

The Office of Public Affairs will review and consolidate web content to provide the public with easily accessible, high quality, timely, coherent, and comprehensive information on the Agency's activities and policies. The Office will coordinate with the Office of Environmental Information to ensure effective distribution of policy and regulatory information requested by citizens, the media, other government entities, and non-government organizations. The Office of Public Affairs will be funded at $5,712 thousand with 44.8 FTE under this program. The Office of Public Affairs informs the general public, state, local and Tribal governments about environmental problems and goals, and works to strengthen communications with state, local and Tribal governments and organizations, news media, and the public. The Office also works to increase public awareness and enhance public perceptions of environmental issues, as well as their social, technological and scientific solutions.

The Office of Executive Services will align and maximize the effective utilization of resources within the Office of the Administrator through workforce and succession planning, addressing staffing needs, conducting workload and budget projections and providing developmental opportunities. In FY 2009 the Office of Executive Services (OES) will be funded at $3,266 thousand with 24 FTE. OES serves as the central management arm of the Office of the Administrator. This office provides up-to-date knowledge, tools, and practices for effective management of administration, human resources, budget and financial management, and information technology.

The Office of the Executive Secretariat (OEX) will be funded at $1,750 thousand with 13.6 FTE. This office manages the Administrator's and Deputy Administrator's correspondence and records, including identification and maintenance of vital records.

The Office of the Executive Secretariat supports the Agency's strategic goals by:

(a) Managing the Agency's correspondence tracking and workflow management database;
(b) Providing records management support, training, and guidance for the Administrator's staff offices; and
(c) Managing all aspects of the Administrator's and Deputy Administrator's non-Congressional correspondence and records management, including identification and maintenance of vital records.

The Regional Administrators and their staff also provide leadership to the Regional offices and states they serve. The Congressional, Intergovernmental and External Relations programs:

- Lead and support the Administration's efforts to pass legislation to protect human health and the environment and implement recently passed legislation.

- Foster public awareness of environmental issues and the Federal government's role in monitoring compliance and enforcing the nation's environmental laws. This awareness is critical to public support and to the Agency's success in meeting its goals.

- Build a stronger EPA partnership with local governments and coordinates with other EPA offices and the Clean Air Advisory Committee on such issues as recycling, landfills, Brownfields, and the Clean Diesel campaign.

- Provide national policy and program management to more fully integrate the National Environmental Performance Partnerships System (NEPPS) framework and principles into the Agency's core business practices. Key activities include:
  (a) Leading an Agency-wide performance management initiative to streamline state reporting burden;
  (b) Implementing the OMB-directed State Grants Performance Measures Template;
  (c) Leading a Performance Partnership Grant (PPG) initiative to encourage broader application of PPG programmatic flexibility by the states; and
  (d) Working with states to develop a longer term strategic plan for the future direction of the state-EPA partnership.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,755.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$695.0 / -5.7 FTE) EPA's Office of Enforcement and Compliance Assurance (OECA) proposes to reorganize its Office of Planning, Policy Analysis and Communications, and reassign staff to other OECA offices. Four of these FTE will transfer to the policy and legislative functions: coordinating and developing cross-cutting polices and Congressional Testimony for non budget issues; reviewing prospective Performance Track incentives, acting as liaison with the Agency's Congressional Office; and developing legislative activities reports.

- (+$110.0 / +2.0 FTE) This increase provides the workforce and contract and expenses funding necessary to support the Farm, Ranch and Rural Communities FACA.

- (-3.4 FTE) This decrease represents anticipated savings accomplished through more efficient management and administrative practices, as well as IT and communications changes that will encourage more economically efficient resource utilization.

- (-$1,180.0) This decrease represents anticipated savings accomplished through more efficient management and administrative practices, as well as IT and communications changes that will encourage more economically efficient resource utilization.

- (+$10.0) This increase provides additional resources for the Administrator's representational fund. The increase from $9 thousand to $19 thousand will allow EPA to host the Commission for Environmental Cooperation's annual meeting in FY2009. EPA hosts the meeting once every three years.

- (+13.6 FTE) Congress directed the Agency to provide staff and funding for Environmental Education in FY 2008. This change represents the return of FTEs that were diverted from this program for that purpose.

- (-$215.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

As provided in Appropriations Act funding; FACA; EAIA; NAFTA Implementation Act; RLBPHRA; NAAED; LPA-US/MX-BR; CERCLA.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$17,541.7***	***$15,364.0***	***$15,137.0***	***$18,058.0***	***$2,921.0***
Hazardous Substance Superfund	$1,374.2	$1,433.0	$1,411.0	$1,433.0	$22.0
Total Budget Authority / Obligations	$18,915.9	$16,797.0	$16,548.0	$19,491.0	$2,943.0
Total Workyears	30.0	24.0	24.0	24.0	0.0

Program Project Description:

This program supports the development and maintenance of the National Environmental Information Exchange Network (the Exchange Network). The Exchange Network is an integrated information network using standardized data formats and definitions to facilitate information sharing among EPA and its partners across the Internet. This program provides resources to develop, implement, operate and maintain the Agency's Central Data Exchange (CDX, www.epa.gov/cdx), EPA's node on the Exchange Network, which is the point of entry for data submissions to the Agency and data exchanges with our partners. This program creates a reliable, secure internet-based approach to exchanging environmental information between trusted partners. As a result, the Exchange Network encourages the development and use of environmental data standards, fosters the adoption of needed authentication and electronic signature approaches and strengthens the partnerships crucial to exchange of environmental information among federal entities, states, tribes and other consortia involved in environmental stewardship activities.

FY 2009 Activities and Performance Plan:

In FY 2009, the major focus of work is on creating national infrastructure, developing new applications for use, and establishing standards, schemas and templates which support environmental data flows. These activities build on efforts started in FY 2004 to enhance the availability, quality, and analytical usefulness of environmental information for EPA and its partners and stakeholders. These efforts support data exchange by states, tribes, and other partners through the use of the Exchange Network and CDX.

After 2007, all 50 states, one territory, and seven tribes will have nodes on the Exchange Network and will be using it to send data to EPA and share data with other partners. In FY 2009, EPA,

states, as well as more tribes and territories, will continue to re-engineer data systems so information that was previously not available, or not easily available, can be transferred via the Exchange Network using common data standards and data formats called schemas. These efforts will be closely coordinated with the Agency's program offices and the Agency's system of data registries. As data flows are added, the broader use of data standards (quality tools that check data before it is submitted) and reusable schemas will increase the accuracy and timeliness of the data, improve analytical capabilities, and create savings through economies of scale.

In addition, EPA will improve data security by implementing electronic reporting standards that support the authentication and electronic signatures of report submitters. EPA will work to provide assistance to states, tribes, and territories in implementing these standards. Effective implementation of the Exchange Network activities relies on close coordination with the Information Security, Agency architecture, and data management activities. Coordination helps to ensure that necessary security measures are adhered to, system platforms follow the Agency's Enterprise Architecture, and data management follows documented standards.

Another major activity for FY 2009 will be OEI's continuing stewardship of the Agency's integration with the Department of Homeland Security/Customs and Border Protection's Automated Commercial Environment/Integrated Trade Data System (ACE/ITDS). EPA has an important role in the development of this system and in ensuring that imports coming into the United States meet American health, environmental and safety standards, and in carrying out effective enforcement against violators. Six major EPA programs across the offices of Enforcement, Toxic Substances, Pesticides, Solid Waste, Transportation and Air Quality and Atmospheric programs have a role. Requested resources will pay for design and development of improved program office business processes and operations; upgraded EPA program office data systems; upgrades to the Agency's Central Data Exchange which will serve as the hub for program system data exchanges with ACE/ITDS; required legal, regulatory and policy analysis and changes in EPA program offices; and, finally, for additional data standards development and coordination with other Agencies necessary to ensure efficient import safety data exchanges across the Federal government. Funding is centralized in this program project but will support the linkage of individual programmatic data sources to ACE/ITDS.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	37	36	45	60	Systems

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	88,516	55,000	100,000	110,000	Users

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$138.0) This change reflects an increase for payroll and cost of living for existing FTE.
- (+$3,100.0) This increase supports environmental information efforts in support of the International Trade Data System (ITDS). The funding will support the development of linkages between several EPA program offices participating in the ACE/ITDS program and the integration effort with Customs and Border Protection.
- (-$600.0) This reduction will be offset by delaying planned enhancements to CDX.
- (+$283.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FACA; GISRA; CERCLA; CAA; CWA; ERD and DAA; TSCA; FIFRA; FQPA; SDWA; FFDCA; EPCRA; CERCLA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; Privacy Act Electronic Freedom of Information Act.

Small Business Ombudsman
Program Area: Information Exchange / Outreach
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$3,761.9***	***$3,261.0***	***$3,210.0***	***$3,217.0***	***$7.0***
Total Budget Authority / Obligations	$3,761.9	$3,261.0	$3,210.0	$3,217.0	$7.0
Total Workyears	11.5	12.0	10.0	12.0	2.0

Program Project Description:

The Small Business Ombudsman (SBO) serves as EPA's gateway and leading advocate for small business regulatory issues. The SBO partners with state Small Business Environmental Assistance Programs (SBEAPs) nationwide, and with hundreds of small business trade associations, to reach out to the small business community. These partnerships provide the information and perspective EPA needs to help small businesses achieve their environmental goals. This is a comprehensive program that provides networks, resources, tools, and forums for education and advocacy on behalf of small businesses.[32] The Office of Small and Disadvantaged Business Utilization (OSDBU) partially utilizes the resources within the Small Business Ombudsman program. OSDBU is funded at $1,903 thousand with 7 FTE.

The core SBO functions include participating in the regulatory development process; operating the Small Business Ombudsman Hotline; supporting the Small Business Environmental Homepage; participating in EPA program and Regional offices' small business related meetings; and supporting internal and external small business activities. The SBO's outreach and communication services help small businesses learn about new EPA actions and developments, and help EPA learn about the concerns and needs of small businesses. The SBO supports partners with state SBEAPs in order to reach an ever-increasing number of small businesses, and to assist them with updated and new approaches for improving their environmental performance. The SBO provides technical assistance in the form of workshops, conferences, hotlines, and training forums designed to help small businesses become better environmental performers and helps our partners provide the assistance that small businesses need.

The remaining resources are utilized by EPA's Office of Policy Economics and Innovation (OPEI). OPEI is funded at $1,314 thousand with 7 FTE. This office assists with EPA's Sector Strategies Program and assesses the effect of regulatory options on small businesses, and proposes flexible, cost-effective solutions to environmental problems in areas such as spill prevention, storm water, air emissions, and recycling of industrial materials. The program also

[32] Please refer to: http://www.epa.gov/sbo/.

quantifies the environmental impact of small business sectors to help EPA and other stakeholders prioritize future activities, and works collaboratively with industry groups to create stewardship programs and meaningful assistance and tools for priority areas.

FY 2009 Activities and Performance Plan:

The Small Business Ombudsman will:

- Support and promote EPA's Small Business Strategy and the President's Management Agenda, by encouraging small businesses, states, and trade associations to comment on EPA rulemaking through the E-Rulemaking initiative, as well as providing updates on the Agency's rulemaking activities in the semi-annual Small Business Ombudsman Update.

- Serve as the Agency's Point of Contact for the Small Business Paperwork Relief Act by coordinating efforts with the Agency's program offices to further reduce the information collection burden for small businesses with fewer than 25 employees.

- Participate with the Small Business Administration and other Federal agencies in Business Gateway "one-stop" activities, which help improve services and reduce the burden on small businesses by guiding them through government rules and regulations. EPA also will support and promote a state-lead multi-media small business initiative and coordinate efforts within the Agency.

- Strengthen and support partnerships with state SBEAPs and trade associations, and provide recognition to state SBEAPs, small businesses, and trade associations that have directly impacted the improved environmental performance of small businesses. Develop a compendium of small business environmental assistance success stories that demonstrate what really works.

- Improve the environmental performance of key small business sectors by developing flexible, cost-effective solutions to environmental issues through the Sector Strategies Program.

Performance Targets:

Work under this program supports EPA's Objective 5.2: Improve environmental Performance through Pollution Prevention and Other Stewardship Practices. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$319.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$100.0) This decrease represents anticipated savings accomplished through improved management and administrative practices that result in more efficient operations.

- (-$212.0) This change reflects restoration of the 1.56% rescission to all program projects combined with several small technical changes such as realignment of IT, travel or other support costs across programs.

- (+2.0 FTE) Congress directed the Agency to provide staff and funding for Environmental Education in FY 2008. This change represents the return of FTEs that were diverted from this program for that purpose.

Statutory Authority:

CAA, section 507.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$2,437.3***	***$2,466.0***	***$2,428.0***	***$2,411.0***	***($17.0)***
Total Budget Authority / Obligations	$2,437.3	$2,466.0	$2,428.0	$2,411.0	($17.0)
Total Workyears	9.3	11.8	9.8	11.8	2.0

Program Project Description:

This program is located in the Office of the Administrator, Office of Small and Disadvantaged Business Utilization (OSDBU). OSDBU fully utilizes the resources of this program and partially utilizes the resources with the Small Business Ombudsman program. The Office of Small and Disadvantaged Business Utilization provides technical assistance to small businesses, and to Headquarters and Regional employees, to ensure that small, disadvantaged, women-owned, Historically Underutilized Business Zone (HUBZone), and Service-Disabled Veteran-Owned Small Businesses (SDVOSBs) receive a fair share of EPA's procurement dollars. This program enhances the ability of these businesses to participate in the protection of human health and the environment. The functions assigned to this area involve ultimate accountability for evaluating and monitoring contracts, grants and cooperative agreements entered into, and on behalf of, EPA's Headquarters and Regional offices. This will ensure that the Agency's contract and procurement practices further the Federal laws and regulations regarding utilization of small and disadvantaged businesses, in both direct procurement acquisitions and indirect procurement assistance.[33]

FY 2009 Activities and Performance Plan:

Small and disadvantaged business procurement experts will provide assistance to Headquarters and Regional program office personnel, as well as small business owners, to ensure that small, disadvantaged, Women-Owned Small Businesses (WOSBs), HUBZone firms, and SDVOSBs receive a fair share of EPA's procurement dollars in FY 2009. This fair share may be received either directly or indirectly through contracts, grants, cooperative agreements, or interagency agreements. EPA has a number of national goals that it negotiates with the Small Business Administration (SBA) every 2 years.

[33] Please refer to: http://www.epa.gov/osdbu/.

In FY 2009, EPA's contract bundling reviews for an increasing number of Agency contracts will: (1) eliminate unnecessary contract bundling, and (2) mitigate the effects of bundling on America's small business community. Strong emphasis will be placed on implementing Section 811 of the Small Business Reauthorization Act of 2000, authorizing contracting officers to restrict competition to eligible WOSBs for certain Federal contracts in industries in which the SBA has determined that WOSBs are underrepresented or substantially underrepresented in Federal procurement. The Agency will emphasize contracting with SDVOSBs, as mandated by the White House's October 21, 2004 Executive Order, which requires increased Federal contracting opportunities for this group of entrepreneurs.

Under its Indirect Procurement Program, EPA has a statutory goal of 10 percent utilization of Minority Business Enterprises/Women-Owned Business Enterprises for research conducted under the Clean Air Act Amendments of 1990, as well as a statutory 8 percent goal for all other programs. The Small Minority Business Assistance program encourages the Agency to meet these direct and indirect procurement goals. These efforts will enhance the ability of America's small and disadvantaged businesses to help the Agency protect human health and the environment and, at the same time, create more jobs. As a result of the Supreme Court's decision in *Adarand v. Pena*, 115 S. Ct. 2097 (1995), EPA will continue implementation of the Agency's rule for the participation of Disadvantaged Business Enterprises in procurements funded through EPA's assistance agreements.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$251.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$100.0) This decrease represents anticipated savings accomplished through improved management and administrative practices that result in more efficient operations.

- (-$168.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (+2.0 FTE) Congress directed the Agency provide staff and funding in for Environmental Education in FY 2008. This change represents the return of FTEs that were diverted from this program for that purpose.

Statutory Authority:

Small Business Act, sections 8 and 15, as amended; Executive Orders 12073, 12432, and 12138; P.L. 106-50; CAA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$12,867.6***	***$12,960.0***	***$12,784.0***	***$13,298.0***	***$514.0***
Total Budget Authority / Obligations	$12,867.6	$12,960.0	$12,784.0	$13,298.0	$514.0
Total Workyears	52.0	57.9	57.9	57.9	0.0

Program Project Description:

EPA works with state and local partners to help protect the public and the environment from catastrophic releases of hazardous substances that occur at chemical handling facilities. Under the Clean Air Act (CAA), EPA regulations require that facilities handling more than a threshold quantity of certain extremely hazardous substances must implement a risk management program and submit a Risk Management Plan (RMP) to EPA. The RMP must also be sent to the state, local planning entity, the Chemical Safety and Hazard Investigation Board, and made available to the public. The RMP describes the hazards of the chemicals used by the facility, the potential consequences of worst case and other accidental release scenarios, a five year accident history, the chemical accident prevention program in place at the site, and the emergency response program used by the site to minimize the impacts on the public and environment should a chemical release occur. Facilities are required to update their RMP at least once every five years and sooner if certain changes are made at the facility.

The Agency works with state and local partners to help them implement their own risk management program through technical assistance grants, technical support, outreach, and training and also works with industry partners to produce tools and guidance used by industry, government and local communities to control hazardous materials. EPA works with communities to provide chemical risk information on local facilities, as well as assist them in understanding how the chemical risks may affect their citizens. Additionally, EPA supports continuing development of emergency planning and response tools such as the Computer-Aided Management of Emergency Operations (CAMEO) software suite. With this information and these tools, communities are in a better position to prepare for, reduce and mitigate releases that may occur.

RMP data are a valuable source of information to homeland security analysts for the identification of potential hazards in the chemical sector. EPA assists the Department of Homeland Security (DHS) by providing updated copies of the RMP database, analytical support, and ongoing technical support for integration of RMP and Emergency Planning and Community Right to Know Act (EPCRA) tools and information into DHS programs. EPA also provides other Federal Agency partners, as well as state and local governments, information and analyses

from the RMP database that is helpful for homeland security planning related to chemical accidents and terrorism. In addition, EPA conducts analyses of RMP data to identify chemical accident trends and industrial sectors that may be more accident-prone and to gain knowledge on the effectiveness of risk management measures[34].

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue its efforts to help state and local partners implement their risk management programs. EPA will continue to refine RMP database analyses, make the data more easily available to appropriate government agencies and improve data utility for security and emergency prevention, preparedness, and response efforts. EPA also will use information generated by the RMPs with other right-to-know data to conduct initiatives and activities aimed at risk reduction in high-risk facilities, priority industry sectors, and/or specific geographic areas. The CAA requires EPA to establish a system to audit RMPs. As such, EPA has developed and implemented an RMP audit and inspection program in an effort to help agencies, states, and prospective third party auditors acquire or improve skills required to conduct audits. This program also is used to continuously improve the quality of risk management programs as well as check compliance with the requirements.

In FY 2009, EPA activities in support of these efforts include the following:

- EPA and other implementing agencies will perform their audit and inspection obligations through a combination of desk audits of RMP plans and at least 400 on-site facility inspections. Due to the increased concern over homeland security, as well as lessons learned from recent accidents, EPA will conduct more RMP inspections in FY 2009 at high-risk facilities, such as petroleum refineries and larger chemical manufacturing sites. EPA will continue its extensive quality assurance oversight of data collection and reporting procedures.

- EPA will complete work on an update and revision to its RMP and EPCRA Inspector Training curriculum, and provide training for Federal, state, and local implementing agency inspectors.

- EPA will complete work to transition the RMP submission system to completely Internet-based risk management plan submission. Transitioning the system to full Internet-based submission capability will reduce facility burden, reduce data processing errors, and result in more timely updates of EPA's RMP*Info database.

- FY 2009 coincides with the second major RMP five year update cycle since inception of the Risk Management Program. All facilities that have not updated their RMPs within the past five years will be required to send an updated plan to EPA. Therefore, EPA will receive and process approximately 10,000 updated Risk Management Plan submissions during this fiscal year.

[34] http://yosemite.epa.gov/oswer/CeppoWeb.nsf/content/RMPsubmission.htm

- Using the results of the FY 2008 survey of the Nation's Local Emergency Planning Committees (LEPCs), EPA will develop guidance materials in order to meet the identified needs of the LEPCs, provide technical assistance, and work with State Emergency Response Commissions (SERCs) and the National Association of State Title III Program Officials (NASTTPO) to provide support for the LEPCs.

- EPA will continue to support DHS' implementation of the Department's Chemical Facility Anti-Terrorism Standards (CFATS). This new regulatory program incorporates the EPA RMP list and threshold quantities, and integrates the RMP*Comp modeling software tool into DHS' Top Screen for CFATS. EPA provides ongoing technical support and consultation to DHS in this effort.

- EPA and the National Oceanic Atmospheric Administration will continue improvements to the CAMEO software suite by updating the MARPLOT® mapping program, adding new information to the CAMEO chemical library to assist first responders and emergency planners, and, in conjunction with industry associations, continue development of a new Chemical Reactivity Management software system that will allow users to more accurately identify and manage hazards involving reactive chemical mixtures. EPA will continue to provide real-time technical support via the RMP Reporting Center. EPA also will provide end user or train-the-trainer training as requested through EPA Headquarters or Regional Offices.

- EPA will work with The Fertilizer Institute to complete publication and outreach on new joint implementation guidance materials for Agricultural Retail Facilities covered under the EPA Risk Management Program. This Internet-based suite of guidance materials will include an on-line tutorial, a guidance manual, and a web-based tool allowing covered facilities to develop, download, and print their own customized operating procedures and maintenance manuals needed for compliance with RMP requirements.

- EPA will participate with the National Fire Protection Association (NFPA) to continue refining the international NFPA Hazardous Chemicals Code (NFPA-400). After its initial publication in 2008, this code will ultimately be adopted by state and local authorities as the standard for storage and handling of hazardous chemicals in most commercial sites. EPA also will continue working with NFPA on revisions to the Liquefied Petroleum Gas safety code (NFPA-58) to make important improvements in safety requirements for propane facilities nationwide.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program/Project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$337.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$177.0) This change reflects the restoration of the 1.56% rescission in addition to small technical changes such as realignment of IT, travel or other support costs across the program.

Statutory Authority:

EPCRA; SARA of 1986; Section 112r, Accidental Release Provisions of the CAA of 1990; Chemical Safety Information, Site Security, and Fuels Regulatory Relief Act.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$14,605.5***	***$15,728.0***	***$15,504.0***	***$15,109.0***	***($395.0)***
Total Budget Authority / Obligations	$14,605.5	$15,728.0	$15,504.0	$15,109.0	($395.0)
Total Workyears	41.9	43.0	43.0	43.0	0.0

Program Project Description:

The Toxics Release Inventory (TRI) program is the Agency's only multi-media, integrated provider of information to the public on the releases and other waste management of toxic chemicals from a broad segment of industrial facilities. The program collects data on over 600 chemicals, operates all systems for warehousing of the information, provides quality assurance, and then makes it publicly available on an annual basis within a year of its collection. Because of their scope and timeliness, TRI data are the premier source of information for community right to know groups and thereby fulfill the Agency's requirements under Section 313 of the Emergency Planning and Community Right to Know Act. The data are also extensively used by the financial community to monitor company "greenness" and by other EPA programs to reduce their own data needs and reply to requests from regulated industries.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA anticipates continuing its efforts to reduce the TRI reporting burden on industry without compromising the utility or quality of the data. The main focus of the FY 2009 efforts in this regard will be to continue to improve web-based applications to simplify reporting and to improve quality assurance tools to better identify areas of industry desired reporting guidance (e.g. trace metals in scrap). This guidance can greatly reduce the cost of completing the TRI questionnaire.

In addition, EPA will continue to provide TRI reporting facilities with compliance assistance through workshops, web-based reference tools, and telephone hotline support. EPA also will continue working to increase the percentage of TRI reports that are submitted in electronic format via EPA's Central Data Exchange (CDX) as well as increasing the number of States participating in TRI data exchange. This latter activity will also reduce industry reporting burden.

The program will also work in partnership with other EPA programs and stakeholder groups to expand the availability and usability of all toxic chemical release information. This will include working with public groups to provide better hazard and other contextual information. Such information will allow local communities to better prioritize their concerns in terms of the

chemicals posing the most significant risk, rather than potentially misleading pounds-based decision making. A key activity in this area is implementing the Toxicity Equivalency Rule (TEQ) which will greatly improve the public's understanding of dioxin emissions.

Performance Targets:

Work under this program supports several cross-cutting goals and objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$166.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$500.0) The reduction reflects the presumption that most programming for the Toxicity Equivalency Rule (TEQ) rule will be completed by FY 2009 and by lower industry training costs as the program increases its use of web based training.

- (-$530.0) This reduction is the result of accounting changes in the regions which have the effect of shifting costs from this program project to the IT/Data Management program project.

- (+$469.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FACA; GISRA; CERCLA; SARA; EPCRA; CAA; CWA; SDWA; TSCA; FIFRA; FQPA; FFDCA; ERD and DAA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA; Pollution Prevention Act.

Tribal - Capacity Building
Program Area: Information Exchange / Outreach
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Human Health and the Environment in Indian Country

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$10,861.3***	***$11,477.0***	***$11,328.0***	***$11,710.0***	***$382.0***
Total Budget Authority / Obligations	$10,861.3	$11,477.0	$11,328.0	$11,710.0	$382.0
Total Workyears	78.8	73.1	73.1	73.1	0.0

Program Project Description:

Under Federal environmental statutes, EPA has responsibility for protecting human health and the environment in Indian country. EPA has worked to establish the internal infrastructure and organize its activities in order to meet this responsibility.

Since adopting the EPA Indian Policy in 1984, EPA has worked with tribes on a government-to-government basis in recognition of the Federal government's trust responsibility to Federally-recognized tribes. EPA's American Indian Environmental Program leads the Agency-wide effort to ensure environmental protection in Indian country. (See http://www.epa.gov/indian/ and http://www.epa.gov/indian/policyintitvs.htm for more information.)

EPA's strategy for this program has three major components:

- Work with tribes to create an environmental presence for each Federally-recognized tribe (discussed under the Tribal General Assistance Program in the STAG appropriation);

- Provide the data and information needed by Tribal governments and EPA to meet Tribal environmental priorities. At the same time, ensure EPA has the ability to view and analyze the conditions on Indian lands and the effects of EPA and Tribal actions and programs on the environmental conditions;

- Provide the opportunity for implementation of Tribal environmental programs by tribes, or directly by EPA, as necessary.

FY 2009 Activities and Performance Plan:

To expand EPA's effort to ensure environmental protection in Indian country, the program strives to provide support to EPA's National Tribal Operations Committee, the Tribal Caucus, and support for Agency-wide multimedia meetings, including the Indian Program Policy Council. EPA conducts program evaluations which aid in improving delivery of financial

services to tribes and is committed to measures development work across the Agency that strengthens the accuracy and relevancy of tribal measure outcomes.

Access to information is a powerful tool in assisting local Tribal priority setting and decision making and is a major emphasis for EPA's Tribal Capacity programs. In FY 2007 EPA launched the American Indian Tribal Portal. The purpose of the portal is to help American Indian communities and supporters locate Tribal related information within EPA and other government agencies. The portal is operated and maintained by EPA's American Indian Environmental Program and work to support this effort will continue in 2009. (See http://www.epa.gov/Tribalportal/ for more information.)

The ability to comprehensively and accurately examine conditions and make assessments provides a blueprint for planning future activities and helps maximize limited resources. Priorities are implemented through the development of Tribal/EPA Environmental Agreements (TEAs) or similar Tribal environmental plans that address and support priority environmental multi-media concerns in Indian country. Complementary to the efforts of providing an environmental presence through the Indian General Assistance Program (GAP), EPA's enhanced information technology infrastructure, which includes the Tribal Program Enterprise Architecture (TPEA), extracts records from databases on the basis of Tribal reservation boundaries and assigns those records to Tribal governments. This process is known as "Tribally enabling" the EPA Enterprise Architecture. By 2009, the continued integration and merger of TPEA with the EPA Enterprise Architecture will lead to a more efficient information technology infrastructure.

TPEA, part of the Agency's Envirofacts system, is a multi-agency, multimedia database that is designed to support Tribal programs for all tribes, as well as the EPA National Program Managers. The database links Tribal environmental information from EPA with Tribal data systems from other agencies, including the U.S. Bureau of Reclamation and the Indian Health Service. In FY 2009, EPA will continue to enhance this database to promote management of Tribal environmental programs and to show results of environmental improvements in Indian country. TPEA organizes environmental data on a Tribal basis, bringing together data from different agencies, programs and Tribes in a format providing a clear, up-to-date picture of environmental conditions in Indian country. TPEA is entirely Internet-based and is designed to track the following three classes of information:

- Environmental information from national monitoring and facility management databases;
- EPA programmatic information, generally utilizing customized databases where data are input by regional program offices; and
- Individual sets of environmental data to be submitted by Tribes.

EPA's Indian Policy affirms the principle 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 the "treatment in a manner similar to a state" (TAS) processes available under several environmental statutes. In FY 2009, EPA will continue to encourage Tribal capacity development to implement federal environmental programs, including the use of Direct Implementation Tribal Cooperative Agreement (DITCA) authority.

EPA instituted an annual review of the national GAP grant program to ensure effective management of grant resources. This effort includes review of Regional GAP programs and individual GAP grant files. Regional reviews of the GAP program by the Agency will continue in FY 2009. All GAP grantees must meet the requirement, begun in FY 2007, to submit a standardized work plan which includes milestones, deliverables and links to the Agency's strategic plan. Standardized workplans lead to a better characterization of environmental and public health benefits of the capacity building activities in a consistent manner.

Performance Targets:

In FY 2009, EPA will continue to support standardization and a crosswalk of Tribal identifier codes to integrate and consistently report Tribal information across Federal agencies. One example of this effort has been the adoption by EPA of the Bureau of Indian Affairs (BIA) Tribal identifier code system as an agency standard for all the EPA databases. TPEA will also, by FY 2009, compile and display the universe of Tribal EPA regulated facilities, assigning each one to a specific Tribal entity, through the use of an Indian country flag in the EPA Facility Registry System. This type of cross-platform data analysis is not possible without EPA's TPEA initiative.

With the addition of these two data systems, EPA will be able to measure environmental quality in Tribal lands in two important areas: ambient quality of air and water, and emissions of pollutants into the environment. Both kinds of measures (ambient quality and emissions) are important in the development of outcome-based performance measures for EPA Tribal programs.

In FY 2009 TPEA will continue to work to link directly to the Sanitation Deficiency System Database (SDS) of the Indian Health Service (IHS). Information in the IHS SDS system is reported in the Agency's Strategic Plan. Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$327.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$55.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Indian General Assistance Program Act, 42 U.S.C. § 4368b (1992), as amended.

Program Area: International Programs

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$5,790.7***	***$4,646.0***	***$5,439.0***	***$0.0***	***($5,439.0)***
Total Budget Authority / Obligations	$5,790.7	$4,646.0	$5,439.0	$0.0	($5,439.0)
Total Workyears	22.0	21.2	21.2	0.0	-21.2

Program Project Description:

The 2,000 mile border between the U.S. and Mexico is one of the most complex and dynamic regions in the world. This region accounts for 3 of the 10 poorest counties in the U.S., with an unemployment rate 250-300 percent higher than the rest of the United States. 432 thousand of the 14 million people in the region live in 1,200 colonias[35], which are unincorporated communities characterized by substandard housing and unsafe drinking water.

The key areas of focus for the Border 2012 Program include: (1) improving water quality in the region; (2) improving availability of low sulfur diesel fuel on the border; (3) the stabilization of abandoned hazardous waste sites; (4) removal of used tire piles along the U.S.-Mexico Border; (5) defining baseline and alternative scenarios for air emissions reductions along the border region; and (6) binational emergency preparedness drills and exercises at border sister cities. Note that additional Border efforts are described in the Infrastructure Assistance: Mexico Border program project narrative.

FY 2009 Activities and Performance Plan:

EPA integrated the U.S.-Mexico Border, International Capacity Building, and Persistent Organic Pollutants programs in FY 2009. The activities are described within the International Sources of Pollution program.

Performance Targets:

Work under this program supports EPA's objective to sustain, clean up, and restore communities and the ecological systems that support them. Currently, there are no performance measures specific to this program project.

[35] http://www.borderhealth.org/border_region.php

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$5,439.0 / -21.2 FTE) This represents a transfer to the International Sources of Pollution program. This is the outgoing transfer from the U.S.-Mexico Border base resources, including payroll and FTE, and does not reflect a reduction in that program's resources.

Statutory Authority:

CWA; CAA; TSCA; RCRA; PPA; FIFRA; Annual Appropriation Acts.

Commission for Environmental Cooperation
Program Area: International Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks; Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,208.8***	***$4,022.0***	***$3,962.0***	***$0.0***	***($3,962.0)***
Total Budget Authority / Obligations	$4,208.8	$4,022.0	$3,962.0	$0.0	($3,962.0)
Total Workyears	6.1	6.4	6.4	0.0	-6.4

Program Project Description:

The Commission on Environmental Cooperation (CEC) is an international organization that was created by the United States, Canada, and Mexico under the North American Agreement on Environmental Cooperation (NAAEC), a side agreement to the North American Free Trade Agreement (NAFTA). The CEC addresses regional environmental concerns, helps prevent potential trade and environmental conflicts, and promotes the effective enforcement of environmental law. The CEC is comprised of a Council, a Secretariat, and a Joint Public Advisory Committee. U.S. participation in the CEC is coordinated by the EPA Administrator, who represents the United States on the three-member Council that governs the Commission.

FY 2009 Activities and Performance Plan:

EPA integrated the Environment and Trade and Commission on Environmental Cooperation programs in FY 2009. The activities are described within the Trade and Governance program.

Performance Targets:

Work under this program supports EPA's objective to sustain, clean up and restore communities and the ecological systems that support them, and also indirectly supports pertinent objectives under all 5 Goals of EPA's Strategic Plan. Currently, there are no performance measures for this specific program.

FY 2009 Change from 2008 Enacted Budget (Dollars in Thousands):

- (-$3,962.0 / -6.4 FTE) This represents a transfer to the Trade and Governance program. This is the outgoing transfer from the Commission on Environmental Cooperation's base resources, including payroll and FTE, and does not reflect a reduction in that program's resources.

Statutory Authority:

NAFTA; NAAEC.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$1,817.4***	***$1,945.0***	***$1,920.0***	***$0.0***	***($1,920.0)***
Total Budget Authority / Obligations	$1,817.4	$1,945.0	$1,920.0	$0.0	($1,920.0)
Total Workyears	8.3	8.9	8.9	0.0	-8.9

Program Project Description:

EPA is a member of the Trade Policy Staff Committee (TPSC) and the Trade Policy Review Group (TPRG), interagency mechanisms that are organized and coordinated by the Office of the United States Trade Representative (USTR) to provide advice, guidance and clearance to the USTR in the development of U.S. international trade and investment policy. This input pertains to comprehensive multilateral trade rounds (e.g., the ongoing Doha round of the World Trade Organization (WTO)), bilateral or plurilateral free trade agreements, and other matters. In addition, USTR and EPA co-manage the Trade and Environment Policy Advisory Committee (TEPAC), a Congressionally-mandated private sector advisory group that provides advice and information in connection with the development, implementation, and administration of U.S. trade policy.

The Trade Promotion Authority (TPA) section of the Trade Act of 2002 requires that the U.S. seek provisions in each trade agreement to prevent lowering environmental standards or weakening the enforcement of existing laws to attract investment or trade. It also calls for environmental reviews of trade agreements and the provision of U.S. assistance to promote sustainable development and increase the capacity of U.S. trading partners to develop and implement environmental protection standards.

In its capacity as a member of the TPSC and TPRG, EPA performs three major functions pursuant to the TPA. First, by contributing to the development, negotiation and implementation of environment-related provisions in all new U.S. free trade agreements, EPA helps to ensure that U.S. trading partner countries improve and enforce their domestic environmental laws, which promotes sound environmental practices. In addition, EPA facilitates trade in environmentally-preferable goods and services during negotiations. As U.S. trading partner countries pursue more environmentally-sound economic development under the trade agreement's environmental provisions, reduced growth in environmental impacts such as air pollution and the inadvertent transmission of invasive alien species is expected. A second major function involves helping to develop the U.S. Government's (USG) environmental reviews of each new free trade agreement. As a complement of this effort, we encourage and support our trade partners in conducting their own assessments of the environmental implications of trade

liberalization. EPA's third major function under the TPA involves helping to negotiate and implement the environmental cooperation agreements that parallel each new trade agreement. EPA and other entities of the USG provide assistance to promote sustainable development and increase the capacity of U.S. trading partners to develop and implement environmental protection standards that offer high levels of protection.

FY 2009 Activities and Performance Plan:

EPA integrated the Environment and Trade and Commission on Environmental Cooperation programs in FY 2009. The activities are described within the Trade and Governance program.

Performance Targets:

Work under this program supports EPA's objective to sustain, clean up and restore communities and the ecological systems that support them, and also indirectly supports pertinent objectives under Goals 1 (e.g., long-range transboundary air pollution) and 2 (e.g., marine pollution and invasives) of EPA's Strategic Plan. To illustrate, EPA's work with China, a major source and shipper of goods to the U.S., is expected to help to reduce ship- and port operations-related air emissions (e.g., of PM and SO_x) associated with U.S imports of their goods. This should help to improve air quality in communities around major U.S. and Chinese ports and help to reduce long-range transmission of air pollution from China. With the conclusion in FY 2008 of ongoing work to develop baseline assessments of the environmental law and enforcement regimes of nine trading partner countries, EPA will be better positioned to advance new performance measures and objectives. Currently, there are no performance measures for this specific program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$1,920.0 / -8.9 FTE) This represents a transfer to the Trade and Governance program. This is the outgoing transfer from the Environmental and Trade base resources, including payroll and FTE, and does not reflect a reduction in that program's resources.

Statutory Authority:

Trade Act of 2002; Executive Order 13141 (Environmental Review of Trade Agreements); Executive Order 13277 (Delegation of Certain Authorities and Assignment of Certain Functions Under the Trade Act of 2002); WTO Agreements; NAFTA; NAAEC; PPA.

International Capacity Building
Program Area: International Programs
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

Goal: Clean and Safe Water
Objective(s): Protect Human Health; Protect Water Quality

Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$7,210.8***	***$5,311.0***	***$5,228.0***	***$0.0***	***($5,228.0)***
Total Budget Authority / Obligations	$7,210.8	$5,311.0	$5,228.0	$0.0	($5,228.0)
Total Workyears	34.9	27.1	27.1	0.0	-27.1

Program Project Description:

EPA has improved the quality of life for all Americans by safeguarding their air, water, and land and helping protect their health. Addressing issues at home is only part of the environmental effort. As globalization continues and as we better understand the interdependencies of ecosystems and the transport of pollutants, it becomes clearer that the actions of other countries can affect the U.S. environment. For example, the water quality of a lake here in the U.S. is affected not only by pesticides from nearby farms, lawns, or gardens but also by pollutants emitted thousands of miles away. Air quality in the U.S. is affected by emissions from other countries. The depletion of a natural resource, such as forest cover in one nation, can have environmental and economic consequences in many other countries. To achieve our domestic environmental objectives, it is important to address foreign sources of pollution that impact the U.S. International capacity-building plays a key role in protecting human health and the environment by providing technical cooperation to help countries reduce air pollution, better manage air quality, and reduce the global use and emission of mercury.

FY 2009 Activities and Performance Plan:

EPA integrated the U.S.-Mexico Border, International Capacity Building, and Persistent Organic Pollutants programs in FY 2009. The activities are described within the International Sources of Pollution program.

Performance Targets:

Work under this program supports EPA's objective to sustain, clean up, and restore communities and the ecological systems that support them. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$5,228.0 / -27.1 FTE) This represents a transfer to the International Sources of Pollution program. This is the outgoing transfer from the International Capacity Building base resources, including payroll and FTE, and does not reflect a reduction in that program's resources.

Statutory Authority:

PPA; FIFRA; CAA; TSCA; NEPA; CWA; SDWA; RCRA; CERCLA; NAFTA; OAPCA; MPRSA; CRCA.

POPs Implementation
Program Area: International Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$1,682.4***	***$1,831.0***	***$1,808.0***	***$0.0***	***($1,808.0)***
Total Budget Authority / Obligations	$1,682.4	$1,831.0	$1,808.0	$0.0	($1,808.0)
Total Workyears	9.9	11.3	11.3	0.0	-11.3

Program Project Description:

This program supports EPA's international efforts to reduce Persistent Organic Pollutants (POPs). Domestic POPs-related activities and associated funding are included in the Toxic Substances: Chemical Risk Management program. EPA's international activities under this program focus on reducing POPs under the Stockholm Convention[36]. Long-range and transboundary atmospheric transport and deposition of POPs such as polychlorinated biphenyls (PCBs), dioxins, and furans are a continuing threat to human health and ecosystems. After release, these pollutants can be transported far from their sources, enter the ecosystem, and bioaccumulate through the food chain. To reduce the risks posed to the American public, both international and domestic sources must be addressed.

To demonstrate the U.S. commitment to international action on these chemicals, EPA is working to mitigate potential risk from POPs reaching the U.S. by long range transport by: 1) reduction/elimination of sources of POPs in countries of origin, focusing on PCB-containing equipment, obsolete pesticides stockpiles, and dioxins and furans emissions from combustion sources; and 2) better inter- and intra-country coordination on POPs implementation activities through improved access to POPs technical, regulatory and program information from all sources, including the Internet.

FY 2009 Activities and Performance Plan:

EPA integrated the U.S.-Mexico Border, International Capacity Building, and Persistent Organic Pollutants programs in FY 2009. The activities are described within the International Sources of Pollution program.

[36] For more information on the Stockholm Convention, see http://www.pops.int

Performance Targets:

Work under this program supports EPA's objective to sustain, clean up, and restore communities and the ecological systems that support them. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$1,808.0 / -11.3 FTE) This represents a transfer to the International Sources of Pollution program. This is the outgoing transfer from the Persistent Organic Pollutants base resources, including payroll and FTE, and does not reflect a reduction in that program's resources.

Statutory Authority:

PPA; FIFRA; CAA; TSCA; NEPA; CWA; MPRSA.

International Sources of Pollution
Program Area: International Programs
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks; Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$0.0***	***$0.0***	***$0.0***	***$12,408.0***	***$12,408.0***
Total Budget Authority / Obligations	$0.0	$0.0	$0.0	$12,408.0	$12,408.0
Total Workyears	0.0	0.0	0.0	59.6	59.6

Program Project Description:

EPA has improved the quality of life for all Americans by safeguarding their air, water, and land and helping protect their health. Addressing issues at home is only part of the environmental effort. As globalization continues and as we better understand the interdependencies of ecosystems and the transport of pollutants from its sources, it becomes clearer that the actions of other countries can affect the U.S. environment. In many cases, it is more efficient to reduce emissions from foreign sources than from domestic ones. Solving these and other problems requires strong collaboration between EPA and its international partners.

To achieve our domestic environmental objectives, it is important to address foreign sources of pollution that impact the U.S. International capacity-building plays a key role in protecting human health and the environment by providing technical cooperation to help countries reduce air pollution, better manage air quality, and reduce the global use and emission of mercury. The depletion of natural resources, such as forest cover in one nation, can have environmental and economic consequences in many other countries. Air quality in the U.S. is affected by emissions from other countries, such as particles, mercury and toxics, which can have a detrimental impact on human health and the environment in the U.S.

Long-range and transboundary atmospheric transport and deposition of POPs such as polychlorinated biphenyls (PCBs), pesticides, dioxins, and furans are a continuing threat to human health and ecosystems. After release, these pollutants can be transported far from their sources, enter the ecosystem, and bioaccumulate through the food chain. EPA's international efforts, under the Stockholm Convention[37], are focused to reduce Persistent Organic Pollutants (POPs). Domestic POPs-related activities and associated funding are included in the Toxic Substances: Chemical Risk Management program.

[37] For more information on the Stockholm Convention, see http://www.pops.int

FY 2009 Activities and Performance Plan:

Air Quality

In FY 2009, EPA will continue to provide technical cooperation to help communities and countries reduce air pollution and better manage air quality. Partnership for Clean Fuels and Vehicles, a global partnership launched at the World Summit on Sustainable Development (WSSD) in 2002, will continue to focus on (a) lead phase-out, (b) introduction of low-sulfur fuels, and (c) introduction of cleaner vehicle technologies. Our efforts in 2009 will include working with the approximately 20 countries that have not yet eliminated lead from gasoline, introducing catalytic converters in those countries that have recently eliminated lead in gasoline, and supporting improved standards and demonstration projects that encourage sulfur reductions in transport fuels to 50 ppm and lower globally.

In continuation of efforts to reduce transboundary stationary-source pollution, EPA will focus on practical measures to achieve reductions in PM, NOx and other emissions. For example, EPA will work with China to reduce dioxin and furans from cement kilns and assess and reduce emissions of PM and mercury from coal combustion sources. To help reduce greenhouse gas (GHG) emissions worldwide, EPA will work with China, Mexico, Russia, and India through capacity and technology transfer activities.

EPA will work to transfer appropriate air management tools and techniques to India, China, Mexico, Central America, Russia, Africa, and other key countries and regions as we collaborate with partners to improve air quality. For example, EPA will work with the Indian government to continue to develop a national standard for nitrogen oxides from power plants, and develop a harmonized air monitoring network in Central America that will be integrated with NASA's satellite monitoring to provide key air quality information throughout Central America.

In FY 2009, as part of its effort to reduce global sources of persistent bioaccumulative toxics, EPA will continue to give priority to reducing the global use and emission of mercury. EPA is a global leader in the development and implementation of Global Partnerships for Mercury Reduction. EPA's mercury partnership work has focused on four sectors – chlor-alkali, products, combustion, and artisanal mining – which together account for over 80% of global anthropogenic atmospheric emissions of mercury[38].

Border Regions

The US/Mexico Border 2012 Program is a joint effort between the U.S. and Mexican governments.[2] In FY 2009, the Program will continue to focus on: (1) improving water quality in the region; (2) improving availability of low sulfur diesel fuel on the border; (3) the stabilization of abandoned hazardous waste sites; (4) removal of used tire piles along the U.S.-Mexico Border; (5) defining baseline and alternative scenarios for air emissions reductions along the border region; and (6) binational emergency preparedness drills and exercises at border sister cities.

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[2] http://www.epa.gov/border2012/pdf/2012_english.pdf

To date, the US/Mexico Border program has successfully implemented Phase 1 and 2 of the stabilization and clean-up of the Metales y Derivados site, an abandoned, secondary lead smelter in Tijuana, which resulted in the removal of nearly 2,000 tons of hazardous waste and recycling of 50 tons of lead smelter process equipment in Mexico. In FY 2009, the Metales y Derivados remediation will be in the final stages of restoration. These actions are consistent with the Border 2012 draft Binational Policy on Clean-Up and Restoration.[3] In FY 2009, incorporating lessons learned, the Border 2012 Program will focus on remediation of other hazardous waste sites on the border. Specifically, Border 2012 has started assessment and will begin clean-up of two new sites: 1) Laguna Escondida in Tamaulipas, Mexico, lagune contaminated with untreated waste; and 2) Nacosari in Sonora, Mexico, an abandoned mine.

Because of the known public and environmental threats of the over 10 million used tires stockpiled across the US/Mexico Border, the cleanup of abandoned tire piles is a significant binational border priority. One of the largest tire piles in the whole border region is the Ciudad Juárez pile, with approximately 4 - 5 million tires. In the California/Baja California region, the largest tire piles were in Centinela, with 1.2 million tires and INNOR, with over 400,000 tires. Working in cooperation with local and state governments and industry, cleanups at all three of the largest tire piles along the border are underway or completed. Cleanup at the INNOR and Centinela tire pile in the Mexicali are completed. Both of these projects sent the waste tires to cement kilns where they were used as tire derived fuel. In FY 2009, Border 2012 will continue the clean up of the remaining large tire pile in Ciudad Juarez, with the goal of removing approximately one million tires per year. In addition, Border 2012 will develop institutional capacity materials for waste management and pollution prevention as they pertain to scrap tire pile prevention along the US/Mexico border.

Water Quality

In FY 2009, EPA will continue developing and implementing its' program to address water quality issues worldwide. In Latin America and Asia, EPA will continue to promote the development and implementation of Water Safety Plans (WSPs), a health-based risk assessment methodology for managing drinking water quality. By identifying the greatest vulnerabilities within an entire water system, from catchment to consumer, water utilities are able to target their investments strategically to have the greatest health impact. This work includes collaborating with the World Health Organization and other key partners on sharing experiences and lessons learned globally. EPA's focus will be to promote WSPs as a sustainable approach to improving drinking water quality. Additionally, EPA will continue to identify and share sustainable finance mechanisms that can be used to support critical water infrastructure improvements in other countries.

EPA is working with national governments in Central America to build regulatory frameworks for wastewater discharges. This effort will focus on building capacity to implement the regional model wastewater discharge regulation, and will include training on inspection of wastewater treatment plants and discharges. In addition, EPA will work with the U.S. Coast Guard, Department of State, and other interested agencies to pursue development of more stringent

[3] http://www.epa.gov/border2012

international air emission standards from ships and will seek U.S. ratification of international treaties that are critical to efforts in addressing vessel and land-based marine pollution. EPA also will work to improve the environmental profile of ports and vessels as ports emerge as a nexus of expanding global trade.

Land Pollution

In FY 2009, EPA will continue to provide technical cooperation, expertise, and assistance to help communities and countries preserve and restore the land and to mitigate sources of land pollution. To demonstrate the U.S. commitment to international action on these chemicals, EPA is working to mitigate potential risk from POPs reaching the U.S. by long range transport by: 1) reduction/elimination of sources of POPs in countries of origin, focusing on PCB-containing equipment, obsolete and prohibited pesticides stockpiles, and dioxins and furans emissions from combustion sources; and 2) better inter- and intra-country coordination on POPs implementation activities through improved access to POPs technical, regulatory and program information from all sources, including the Internet.

In FY 2009, EPA will continue efforts to reduce sources of POPs worldwide. Efforts will focus on regions and countries whose POPs releases are having the most significant impact on U.S. human health and the environment, specifically Russia, China, India, and Central America. EPA will transfer innovative U.S. technologies to these countries and regions, and will help develop regulatory and financial infrastructure for sustainable projects.

Persistent Organic Pollutants

EPA will continue to assist Russia in inventory development, repackaging, laboratory testing, and environmentally-safe storage of up to 700 tons of obsolete pesticides, including pesticides containing POPS and heavy metals. EPA also will continue working with Russia on development of infrastructure for environmentally-safe destruction of PCBs and obsolete pesticides. In 2009, EPA will develop the Integrated Hazardous Waste Management Strategy for Russia and begin destruction of pesticides in two Russian regions. In addition, EPA will assist China with the first pilot demonstration project to reduce dioxins/furans emissions from the Chinese cement sector, which produces over one-half of the world's cement.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of countries completing phase out of leaded gasoline. (incremental)			7	4	Countries

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cleanup waste sites in the United States-Mexico border region. (incremental)				1	sites

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of countries introducing low sulfur in fuels. (incremental)			2	3	Countries

FY 2009 Change from 2008 Enacted Budget (Dollars in Thousands):

- (+$5,228.0 / +27.1 FTE) This redirection is the result of a realignment of program projects. These funds are an incoming transfer of the International Capacity Building program's base resources, including payroll and FTE.

- (+$1,808.0 / +11.3 FTE) This redirection is the result of a realignment of program projects. These funds are an incoming transfer of the Persistent Organic Pollutants program's base resources, including payroll and FTE.

- (+$5,439.0 / +21.2 FTE) This redirection is the result of a realignment of program projects. These funds are an incoming transfer of the US/Mexico Border program's base resources, including payroll and FTE.

- (+$584.0) This reflects an increase for payroll and cost of living for the transferred existing FTE.

- (-$651.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PPA; FIFRA; CAA; TSCA; NEPA; CWA; SDWA; RCRA; CERCLA; NAFTA; OAPCA; MPRSA; CRCA; Annual Appropriation Acts.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$0.0***	***$0.0***	***$0.0***	***$6,216.0***	***$6,216.0***
Total Budget Authority / Obligations	$0.0	$0.0	$0.0	$6,216.0	$6,216.0
Total Workyears	0.0	0.0	0.0	16.3	16.3

Program Project Description:

As our understanding of environmental issues has increased, so has our appreciation of the need to partner with other countries on environmental goals. International cooperation is vital to achieving our mission. Our shared goals for environmental protection can open doors between the United States and foreign governments. Assisting other countries in their environmental protection efforts can be an effective part of a larger U.S. strategy for promoting sustainable development and advancing democratic ideals. EPA supports U.S. diplomatic, trade, and foreign policy goals that extend far beyond our domestic agenda.

Good environmental governance abroad not only yields a cleaner environment, it helps ensure that U.S. companies and communities compete on an equal footing in the international marketplace. In particular, EPA works with U.S. trading partners to help them enforce their own environmental laws. Through leadership in the Commission on Environmental Cooperation (CEC), the Organization for Economic Cooperation and Development, and other international entities, EPA supports environmental performance reviews of other countries so that good governance best practices (such as providing access to information, collaborating with diverse stakeholders, and providing transparency in environmental decision making) are shared and countries continually improve.

EPA has played a key role in ensuring trade-related activities also sustain environmental protection since the 1972 Trade Act mandated inter-agency consultation by the U.S. Trade Representative on trade policy issues. U.S. trade with the world has grown rapidly from $34.4 billion in 1960 to $2.884 trillion in 2006 (U.S. Census Bureau, Foreign Trade Division). This increase underscores the importance of addressing the environmental consequences associated with trade. EPA is a member of the Trade Policy Staff Committee (TPSC) and the Trade Policy Review Group (TPRG), interagency mechanisms that are organized and coordinated by the Office of the United States Trade Representative (USTR) to provide advice, guidance and clearance to the USTR in the development of U.S. international trade and investment policy. This input pertains to comprehensive multilateral trade rounds (e.g., the ongoing Doha round of the World Trade Organization (WTO)), bilateral free trade agreements, and other matters. In addition, USTR and EPA co-manage the Trade and Environment Policy Advisory Committee

(TEPAC), a Congressionally-mandated advisory group that provides advice and information in connection with the development, implementation, and administration of U.S. trade policy. EPA, represented by the Administrator, is the lead U.S. agency to implement the North American Agreement on Environmental Cooperation (NAAEC), which involves trilateral efforts to assess and reduce the environmental effects of the recent dramatic increases in trade among the three North American nations.

The establishment of the NAAEC was driven by the notion that trade liberalization would increase trade but subsequently would likely have a negative impact on the environment in North America. NAFTA did in fact result in increased commerce, and trade with NAFTA partner countries has increased 480.6 percent since 1985 (in 1985 total trade among Canada, Mexico and the U.S. was $149.0 billion; in 2006 that number grew to $865.3 billion).[39] Booming trade after NAFTA's entry into force has caused increasing traffic congestion and related environmental consequences, particularly in terms of air pollution.[40] For example, the majority of trade between Mexico and the U.S. is carried by heavy-duty diesel trucks, which are major emitters of NOx and particulate matter (PM). The increased traffic entering the U.S. at key border crossings, such as the San Diego/Tijuana area, have resulted in correspondingly higher NOx and PM emissions.[41]

To address trade-related environmental issues, EPA performs four major functions. First, by contributing to the development, negotiation and implementation of environment-related provisions in all new U.S. free trade agreements, EPA helps to ensure that U.S. trading partner countries improve and enforce their domestic environmental laws. EPA also works with USTR to promote environmental protection through liberalized trade in environmentally-preferable goods and services. A second major function involves helping to develop the U.S. Government's (USG) environmental reviews of each new free trade agreement, as well as encouraging other trade partners to assess the environmental implications of their own trade liberalization commitments. EPA's third major function in this area involves helping to negotiate and implement the environmental cooperation agreements that parallel each trade agreement, such as the NAAEC. EPA, along with USG agencies and other collaborators support implementation of agreements by assisting our trading partners to develop effective and efficient environmental protection standards. A fourth major function is to provide technical and policy guidance so as to minimize potential conflicts between trade and environment policy during the negotiation of trade policy and obligations, as well as the development of domestic regulations.

FY 2009 Activities and Performance Plan:

During FY 2009, EPA will continue to provide input to U.S. engagement in multilateral trade negotiations and initiation and/or conclusion of new bilateral free trade agreements and trade and investment framework agreements. To facilitate a successful conclusion of the Doha Round of

[39] US Census Bureau, Foreign Trade Division, 2007
[40] U.S. Transportation Research Board, The National Academies, "Critical Issues in Transportation," 2006
[41] Short-term exposure to diesel exhaust can irritate the eye, nose and throat, cause respiratory symptoms such as increased cough, labored breathing, chest tightness and wheezing, and cause inflammatory responses in the airways and the lung. Longer-term exposure to diesel exhaust can cause chronic respiratory symptoms and reduced lung function, and may cause or worsen allergic respiratory diseases such as asthma

negotiations under the WTO, EPA will continue to provide the USTR with policy and technical guidance, as well as analytical data to inform environmental practices in key trade partner countries. In addition to helping the USTR develop and negotiate the environmental provisions of these agreements, EPA will contribute to the associated environmental reviews and environmental cooperation agreements and advocate greater attention to key environmental concerns (e.g., invasive species and air pollution) associated with the movement of traded goods.

EPA also will provide targeted capacity building support under the environmental cooperation agreements developed parallel to U.S. free trade agreements such as those with Jordan, Chile, Bahrain, Morocco, Oman, Singapore, and in the Central American, North American and the Caribbean regions. Should the newly concluded agreements with Colombia, Peru or South Korea enter into force, EPA will seek to provide appropriate capacity building assistance to these countries. The priorities for a majority of this cooperative work are established through a State Department-chaired and -led inter-agency process in which EPA is a full member, with additional input provided by the USTR-led inter-agency process. NAAEC priorities are set by the CEC member countries.

As the first environmental cooperation agreement under a trade agreement, the NAAEC paved the way for many of our subsequent efforts under other FTAs and is thus a good example of EPA's approach to trade-related work. Through the NAAEC, EPA will continue to work with Mexico and Canada through the CEC to facilitate trade expansion while protecting the environment by:

- Increasing the comparability, reliability and compatibility of national and sub-regional information.

- Strengthening institutions and sharing environmental knowledge among a broad range of stakeholders.

- Promoting policies and actions that provide mutual benefits for the environment, trade and the economy.

EPA will continue to strengthen cooperation and promote public participation in the development and improvement of environmental laws, regulations, procedures, policies and practices. EPA will support the CEC's efforts to strengthen capacity and improve compliance with environmental laws while encouraging voluntary measures on the part of industry. EPA also will continue to work with the CEC to implement quality assurance mechanisms, transparency, and cost effectiveness. EPA will also support CEC efforts as it works with the Parties to the NAAEC to: 1) strengthen enforcement of environmental laws; 2) facilitate the movement of legal materials across borders by improving the exchange of information, training customs and other law enforcement officials; and 3) build the capacity of legal and judicial systems, with an emphasis on Mexico.

The CEC continues efforts on the Sound Management of Chemicals program, which promotes regional cooperation and capacity building for pollution prevention, source reduction, and pollution control for chemicals of common concern. North American Regional Action Plans

were developed and are being implemented for mercury, lindane, and dioxin and furans. EPA will also support the CEC's efforts to publish report data on pollutant releases and transfers from industrial activities in North America with an emphasis on increasing the comparability of Pollutant Release and Transfer Registers (PRTRs) and building Mexico's capacity to collect and report data. EPA will continue to support the development of an integrated monitoring program for the sound management of chemicals and the development of a digital North American Environmental Atlas, which will improve the comparability of data and compatibility of information across the three countries in North America on continent-wide environmental topics, including a harmonized classification system for industrial pollutant data.

EPA will support the CEC's efforts to catalyze cooperation among the Parties to the NAAEC on North American Air Quality management through the completion and implementation of a new strategy that builds upon the previous CEC work to assist Mexico in developing emissions inventories and building air monitoring capacities that are comparable with the United States and Canada. In addition, EPA will continue to address the environmental concerns associated with increased trade. The Agency will work to decouple economic growth from negative environmental impacts by: 1) promoting the North American market for renewable energy; 2) encouraging green purchasing; and 3) expanding the use of market based mechanisms to increase sustainable trade while encouraging conservation.

Performance Targets:

Work under this program supports EPA's Goal 4 objective to sustain, clean up and restore communities and the ecological systems that support them, and also indirectly supports all four additional goals. There are currently no performance measures for this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,962.0 / +6.4 FTE) This redirection is the result of a realignment of program projects. These funds are an incoming transfer of the Commission on Environmental Cooperation program's base resources, including payroll and FTE.

- (+$1,920.0 / +8.9 FTE) This redirection is the result of a realignment of program projects. These funds are an incoming transfer of the Environment and Trade program's base resources, including payroll and FTE.

- (+1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.

- (+$90.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$244.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Trade Act of 2002; Executive Order 13141 (Environmental Review of Trade Agreements); Executive Order 13277 (Delegation of Certain Authorities and Assignment of Certain Functions Under the Trade Act of 2002); WTO Agreements; NAFTA; NAAEC; PPA.

Program Area: IT / Data Management / Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,291.9***	***$5,583.0***	***$5,504.0***	***$5,790.0***	***$286.0***
Hazardous Substance Superfund	$562.3	$792.0	$780.0	$801.0	$21.0
Total Budget Authority / Obligations	$4,854.2	$6,375.0	$6,284.0	$6,591.0	$307.0
Total Workyears	10.2	15.8	15.8	15.8	0.0

Program Project Description:

The Information Security program protects the confidentiality, availability, and integrity of EPA's information assets. The program also 1) establishes a risk-based cyber security program using a defense-in-depth approach that includes partnering with other Federal agencies and the states, 2) implements aggressive efforts to respond to evolving threats and computer security alerts and incidents, and integrates information security into its day-to-day business, 3) manages the Federal Information Security Management Act data collection and reporting requirements, and 4) supports the development, implementation, and operation and maintenance of the Automated Security Self Evaluation and Reporting Tool documentation system.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA also will coordinate information security activities which support emerging Homeland Security IT needs, as well as Exchange Network and IT/Data Management program requirements. The Agency will, where possible, identify and implement more efficient solutions.

Effective information security is a constantly moving target. Every year, Agency managers are challenged with responding to increasingly creative and sophisticated attempts to breach organizational protections. The goal of the Agency's Information Security program is to effectively protect the confidentiality, availability, and integrity of EPA's information assets amid the evolving risks that are present in a fully networked world. The Agency's Information Security program uses a defense-in-depth approach that includes partnering with other Federal agencies and states, integrating information security into day-to-day business operations, and aggressively responding to evolving threats and computer security alerts and incidents. The program is based on a successful implementation of the Federal Risk Management Framework, mandated by the Federal Information Security Management Act (FISMA). This is a collective

effort to harden the Agency's diverse and distributed IT environments in accordance with federal security standards.

The foundation for the Federal Risk Management Framework is a requirement that Agency managers understand the protection requirements of the information they use while fulfilling the Agency's mission operations. Based upon that understanding, managers must ensure appropriate federal security standards are implemented, that security standard decisions are documented, and, most importantly, that implementation is rigorously monitored to ensure the protection remains effective. The Information Security program assists Agency managers in implementing these requirements as well as preparing and providing periodic mandated reports to the Office of Management and Budget (OMB) and Congress. Failing to securely manage Agency information and information systems could severely disrupt the Agency's ability to fulfill its environmental mission. A breach of confidentiality, such as a release of sensitive personally identifiable information (PII), could do significant harm to individuals as well as impact the Agency's budgetary decisions and harm the Agency's credibility. Breaches of integrity and availability could severely impact confidence in the reliability of Agency information. If such breaches accompanied an emergency of some kind, it would negatively affect the Agency's emergency response.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	Percent

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$54.0) This reflects an increase for payroll and cost of living for existing FTEs.
- (+$232.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FISMA; GPRA; GMRA; CCA; PRA; FOIA; PR; EFOIA.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$99,196.3***	***$91,019.0***	***$90,753.0***	***$94,360.0***	***$3,607.0***
Science & Technology	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Leaking Underground Storage Tanks	$136.5	$177.0	$174.0	$162.0	($12.0)
Oil Spill Response	$23.8	$34.0	$33.0	$24.0	($9.0)
Hazardous Substance Superfund	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Total Budget Authority / Obligations	$119,854.2	$111,067.0	$110,496.0	$115,277.0	$4,781.0
Total Workyears	497.4	488.0	488.0	488.0	0.0

Program Project Description:

Agency offices rely on the IT/Data Management program and its capabilities to develop and implement tools for ready access to accurate and timely data. This program houses all of the critical IT infrastructure that allows efficient exchange and storage of data, analysis and computations. It also allows access to the scientific, regulatory, and best practice information needed by agency staff, the regulated, community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with EPA's Research and Development and Air and Radiation programs. Because the IT/Data Management function supports the entire Agency, funds are provided in each operating appropriation including Environmental Programs and Management.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal. The program: (1) supports the development, collection, management, and analysis of environmental data (to include both point source and ambient data) to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access; (3) manages the

Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines; and (4) supports Regional information technology infrastructure, administrative and environmental programs, and telecommunications.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Information Technology community will continue to focus on improving the Agency's use of technology, pursuing enterprise solutions and protecting privacy and security of data holdings while improving delivery of information and services to partners and citizens. The Agency's IT/Data Management program forms the core of this effort with its focus on building and implementing the Agency's Integrated Portal and Enterprise Content Management System (ECMS), developing improved Environmental Indicators, and deploying enterprise-wide IT infrastructure solutions. The ECMS and EPA's enterprise-wide IT infrastructure solutions, combined with the Exchange Network and CDX, provide the foundation for improved information and data access and sharing opportunities among the states, the tribes, the public, the regulated community, and EPA.

The Environmental Information program's FY 2009 technology efforts have three major components:

- OEI's efforts in the areas of Analytical Capacity and Indicators are expected to help identify data gaps, and suggest areas where additional capacity is needed;
- Through use of the portal and Exchange Network, the Technology Initiative program will increase the integration of quality data, streamline transactions to foster collaboration, reduce the data entry burden, and improve decision making;
- OEI's Readiness to Serve initiative will build the capacity and infrastructure needed to allow more EPA employees to telecommute or work safely and securely in the field.

Feedback and results received during stakeholder meetings on EPA's FY 2003 "Draft Report on the Environment" identified key areas for data collection, review and analysis. EPA's technology efforts and its focus areas work together to advance data analyses and the development of an analytical tool kit, including environmental indicators. These efforts will be reflected in the next "Report on the Environment." That document has two major components, the science document and the summary document, both of which are expected to be released to the public in mid-2008.

Technology efforts in FY 2009 for EPA's Integrated Portal activities include implementing identity and access management solutions and integrating geospatial tools. The Portal is the EPA's link to diverse data sets and systems giving users the ability to perform complex environmental data analyses on data stored at other locations. It provides a single business gateway for employees to access, exchange and integrate standardized local, Regional and national environmental and public health data.

Using a collaborative process, the Agency will continue to implement the ECMS project, an enterprise-wide, multi-media solution designed to manage and organize environmental data and documents for EPA, Regions, field offices and laboratories. Previously fragmented data storage approaches will be converted, over time, into a single resource on a standard platform which is accessible to everyone in the Agency, reducing data and document search time and assisting in security and information retention efforts.

EPA's infrastructure program will continue to deliver secure information services to ensure that the Agency and its programs have a full range of information technology infrastructure components (e.g., user equipment, network connectivity, e-mail, application hosting, and remote access) that make information accessible across the spectrum of mission needs at all locations. The program uses performance-based, outsourced services to obtain the best solutions (value for cost) for the range of program needs. This includes innovative multi-year leasing that sustains and renews technical services in a least-cost, stable manner as technology changes over time (e.g., desktop hardware, software and maintenance). Physical infrastructure is a challenge because demands on bandwidth increase as system capabilities and public users grow.

EPA's environmental information needs require the Agency to ensure that it is keeping pace with the states in the areas of data collection, management and utilization. Additionally, this program will continue to focus on information security and the need for each Regional office to have an internal IT security capacity. The Regional offices will implement Agency information resource management policies in areas such as data and technology standards, central data base services, and telecommunications.

In FY 2009, EPA continues active participation in nine government-wide E-government initiatives and six Lines of Business. Through these projects, EPA will implement consolidated practices used to manage information technology, improve access and tools for analysis of environmental information, create new approaches to allow citizens and businesses to more directly participate in Agency rulemaking activities, and develop enterprise solutions for our internal business practices. EPA contributions to the initiatives are intended to ensure efficiency, economy, and security in federal IT investments and systems used by federal employees, partners, stakeholders and citizens.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,287.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$530.0) This change is a shift of regional resources from TRI/Right to Know program into general IT support.

- (+$1,218.0) This increase reflects a restoration of funds that were reduced in this program in FY 2008 for anticipated Agency-wide IT/infrastructure savings pending analysis of final costing. The analysis has been completed and funding changes have been incorporated across the board for FY 2009 IT/infrastructure costs.

- (-$1,000.0) This decrease reduces congressionally-directed funding of $1 million for library support. Funds were provided for enhancements to benefit the entire EPA Library Network. The FY 2009 budget request will support the Network at the level of service described in the Report to Congress due March 26, 2008.

- (-$423.0) This change reflects the net of expected savings from IT and telecommunications to support investment in e-Government activities.

- (+$1,995.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs

- (-0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.

Statutory Authority:

FACA; GISRA; CERCLA; CAA; CWA; ERD &DAA;TSCA; FIFRA; FQPA; SDWA; FFDCA; EPCRA; RCRA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,891.0***	***$5,260.0***	***$5,178.0***	***$4,949.0***	***($229.0)***
Total Budget Authority / Obligations	$4,891.0	$5,260.0	$5,178.0	$4,949.0	($229.0)
Total Workyears	34.3	34.7	34.7	33.7	-1.0

Program Project Description:

This program provides support to EPA's Administrative Law Judges (ALJs) and Environmental Appeals Board (EAB). The ALJs preside in hearings and issue decisions in cases initiated by EPA's enforcement program concerning those accused of environmental violations. The EAB issues final decisions in environmental adjudications, primarily enforcement and permit-related, that are on appeal to the Board. ALJs and the EAB issue decisions under the authority delegated by the Administrator. These decisions establish the Agency's legal interpretation on the issues presented. The EAB also makes policy determinations in the matters before it, as necessary and appropriate to resolve disputes. In addition, the EAB serves as the final approving body for proposed settlements of enforcement actions initiated by the Agency's Headquarters Offices.

FY 2009 Activities and Performance Plan:

In FY 2009 the ALJ office will be funded at $2,721 thousand with 18.3 FTE, and the EAB office will be funded at $2,228 thousand with 15.4 FTE. By adjudicating disputed matters, the ALJs and EAB will further the EPA's long-term strategic goals of protecting human health and the environment in FY 2009. The EAB issues final Agency decisions in environmental adjudications on appeal to the Board. These decisions are the end point for appeals in the Agency's administrative enforcement and permitting programs. The right of affected persons to appeal these decisions within the Agency is conferred by various statutes, regulations and constitutional due process rights. The ALJs will preside in hearings and issue initial decisions in cases brought by EPA's enforcement program against those accused of environmental violations under various environmental statutes.

The Agency has sought efficiencies in this process. The ALJs have increased their use of alternative dispute resolution techniques to facilitate the settlement of cases and, thereby,

avoided more costly litigation. The EAB and ALJs also use videoconferencing technology to reduce expenses for parties involved in the administrative litigation process.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

- (-$229.0) This change reflects the 1.56% rescission to all program projects combined with small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CERCLA; FIFRA; CWA; CAA; TSCA; RCRA; SDWA; EPCRA; as provided in Appropriations Act funding.

Alternative Dispute Resolution

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$970.5***	***$1,175.0***	***$1,160.0***	***$1,264.0***	***$104.0***
Hazardous Substance Superfund	$1,020.6	$837.0	$825.0	$846.0	$21.0
Total Budget Authority / Obligations	$1,991.1	$2,012.0	$1,985.0	$2,110.0	$125.0
Total Workyears	6.6	7.3	7.3	7.3	0.0

Program Project Description:

The Agency's General Counsel and Regional Counsel Offices will provide environmental Alternative Dispute Resolution (ADR) services.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will provide conflict prevention and ADR services to EPA Headquarters and Regional Offices and external stakeholders on environmental matters. The national ADR program assists in developing effective ways to anticipate, prevent and resolve disputes and makes neutral third parties – such as facilitators and mediators – more readily available for those purposes. Under EPA's ADR Policy, the Agency encourages the use of ADR techniques to prevent and resolve disputes with external parties in many contexts, including adjudications, rulemaking, policy development, administrative and civil judicial enforcement actions, permit issuance, protests of contract awards, administration of contracts and grants, stakeholder involvement, negotiations, and litigation.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$53.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$51.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

EPA's General Authorizing Statutes.

Civil Rights / Title VI Compliance

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$10,796.0***	***$11,240.0***	***$11,065.0***	***$11,097.0***	***$32.0***
Total Budget Authority / Obligations	$10,796.0	$11,240.0	$11,065.0	$11,097.0	$32.0
Total Workyears	71.1	70.0	70.0	68.5	-1.5

Program Project Description:

EPA's Office of Civil Rights provides policy direction and guidance on equal employment opportunity, civil rights, affirmative employment and diversity issues for the Agency's program offices, Regional offices and laboratories. EPA's Civil Rights Programs include Title VI compliance and review; intake and processing of complaints of discrimination from Agency employees and applicants for employment under Title VII; implementation of processes and programs in support of reasonable accommodation and Minority Academic Institutions (MAIs); and diversity initiatives, especially those related to issues on ageism and sexual orientation. Program functions include accountability for implementation, program evaluation and compliance monitoring of the Civil Rights Act of 1964 (Titles VI, VII, IX), and legislative requirements and executive orders covering civil rights, affirmative employment, disability, and MAIs. The program also interprets policies and regulations, ensures compliance with civil rights laws, Equal Employment Opportunity Commission (EEOC) regulations, and equal employment initiatives, and upholds the civil rights of EPA employees and prospective employees as required by Federal statutes and Executive Orders. EPA's Office of Civil Rights provides policy direction and guidance on equal employment opportunity, civil rights, affirmative employment and diversity issues for the Agency's program offices, Regional offices and laboratories.

FY 2009 Activities and Performance Plan:

The FY 2009 funding amounts for the Office of Civil Rights in Headquarters will be $7,656 thousand with 39.5 FTE and the Regional portion will be funded at $3,441 thousand with 29.0 FTE. In FY 2009, the Office of Civil Rights will focus on its core mission, to insure the fair and equitable treatment of all employees and applicants, and to foster an environment in which diversity is recognized as a valuable resource within the Agency as a whole. EPA expects to conduct compliance reviews of five recipients of EPA financial assistance in FY 2009. The

Agency's Civil Rights External Compliance Program also expects to improve its processing of external complaints.

In FY 2009, the Agency will:

- Work with the U.S. Department of Justice, Department of Health and Human Services and the Department of Education on issues regarding discrimination on the basis of age, sex, and other factors, as well as working with other Federal agencies that may simultaneously receive discrimination complaints from the same complainant regarding a particular recipient agency.

- Work to reduce employment complaints while completing all new discrimination complaints within required time frames.

- Ensure that certification training and guidance is provided to more than 100 EEO Counselors in the Agency's Regional offices per year. The Agency will continue to train EEO Officers in the Discrimination Complaint Tracking System, and provide technical assistance as needed.

- Examine ways to more effectively and efficiently reduce the number of pending complaints, increase the number of compliance reviews conducted, and improve recipient agencies civil rights programs through guidance and/or training.

- Monitor and evaluate the effectiveness of the Reasonable Accommodation process. Continue to provide technical assistance to managers, supervisors, employees and the designated Local Reasonable Accommodation Coordinators, in the form of expert training and consultation by the Northeast Regional Application Center, to insure efficient implementation of the policy and procedures.

- Monitor the Agency's compliance with various statutes, EEOC regulations, EPA policy and procedures related to the reasonable accommodation of qualified applicants and employees with disabilities.

- The Affirmative Employment and Diversity staff will provide programs that increase the cultural awareness of minorities and women; highlight the accomplishments of EPA employees involved in ensuring equal employment opportunity; support special emphasis programs and initiatives that involve management, unions, and community groups; meet on a regular basis with external and union officials to improve communication and relationships; and coordinate the development of recruitment and retention strategies.

- In FY 2009, the MAI program will conduct information exchange sessions with Agency managers from each Region and program office; meet with representatives from minority colleges; introduce representatives from minority colleges to appropriate Agency personnel; participate on interagency workgroups that support Federal assistance for minority colleges; and facilitate constructive dialogues that will advance the goals of the MAI program.

As a result of these activities, the Agency's mission and cornerstone themes will be supported by a workforce that is motivated, treated in a fair and non-discriminatory manner and produce positive outcomes with respect to the Agency's goals.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$81.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$49.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.
- (-1.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

CRA VII, as amended; FWPCA amended; Title IX of the Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; Age Discrimination Act of 1975; Rehabilitation Act of 1974, as amended; ADA as amended; OWBPA as amended; ADEA as amended EEOC Management Directive 715; Executive Orders 13163, 13164, 13078, 13087, 13171, 11478, 13125, 13096, 13230, 13256 February 12, 2002 (HBCUs), 13270 July 3, 2002 (Tribal Colleges), 13339 May 13, 2004 (Asian American Participation in Federal Programs).

Legal Advice: Environmental Program

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$38,242.4***	***$39,366.0***	***$39,480.0***	***$39,925.0***	***$445.0***
Hazardous Substance Superfund	$826.8	$606.0	$740.0	$631.0	($109.0)
Total Budget Authority / Obligations	$39,069.2	$39,972.0	$40,220.0	$40,556.0	$336.0
Total Workyears	240.8	247.2	247.2	247.2	0.0

Program Project Description:

The Agency's General Counsel and Regional Counsel Offices will provide legal representational services, legal counseling and legal support for all Agency environmental activities.

FY 2009 Activities and Performance Plan:

In FY 2009, legal advice to environmental programs will include litigation support representing EPA and providing litigation support in cases where EPA is a defendant, as well as those cases where EPA is not a defendant, but may have an interest in the case. Legal advice, counsel, and support are necessary for Agency management and program offices on matters involving environmental issues including, for example, providing interpretations of, and drafting assistance on, relevant and applicable laws, regulations, directives, policy and guidance documents, and other materials.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,892.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$707.0) This change reflects restoration of the 1.56% rescission to all program projects combined with several changes in IT, travel or other support costs.

- (-$740.0) This change reduces a congressionally directed increase in the FY 2008 Omnibus. Support efforts for agency programs can be implemented at the requested level.

Statutory Authority:

EPA's General Authorizing Statutes.

Legal Advice: Support Program

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$12,435.8***	***$13,986.0***	***$14,117.0***	***$14,442.0***	***$325.0***
Total Budget Authority / Obligations	$12,435.8	$13,986.0	$14,117.0	$14,442.0	$325.0
Total Workyears	81.0	85.3	85.3	85.3	0.0

Program Project Description:

The General Counsel and the Regional Counsel Offices provide legal representational services, legal counseling and legal support for all activities necessary for the operation of the Agency.

FY 2009 Activities and Performance Plan:

In FY 2009, legal representational services, legal counseling and legal support will be provided for all Agency activities as necessary for the operation of the Agency (i.e., contracts, personnel, information law, ethics and financial/monetary issues). Legal services include litigation support representing EPA and providing litigation support in cases where EPA is a defendant as well as those cases where EPA is not a defendant, but may have an interest in the case. Legal advice, counsel and support are necessary for Agency management and administrative offices on matters involving actions affecting the operation of the Agency, including, for example, providing interpretations of relevant and applicable laws, regulations, directives, policy and guidance documents, and other materials.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$708.0) This reflects increase for payroll and cost of living for existing FTE.

- (-$383.0) This change reflects restoration of the 1.56% rescission to all program projects combined with several technical changes such as realignment of IT, travel or other support costs across programs. Funds will support legal analyses and operations in FY 2009.

Statutory Authority:

EPA's General Authorizing Statutes.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$3,399.8***	***$3,574.0***	***$3,518.0***	***$3,318.0***	***($200.0)***
Total Budget Authority / Obligations	$3,399.8	$3,574.0	$3,518.0	$3,318.0	($200.0)
Total Workyears	3.5	3.0	3.0	2.0	-1.0

Program Project Description:

The Regional Science and Technology (RS&T) program supports the purchase of equipment for use by Regional laboratories, field investigation teams, and mobile laboratory units, as well as that required for laboratory quality assurance and quality control. Regional laboratories provide essential expertise in ambient air monitoring, analytical pollution prevention, and environmental biology, microbiology, and chemistry. Centers of Applied Science for specialty work have been established in these areas as well. In recent years, EPA has made significant strides toward improving data collection and analytical capacity to strengthen science based decision making. Funding for necessary equipment is essential for continued progress.

RS&T activities support all of the Agency's national programs and goals, especially enforcement, by supplying ongoing laboratory analysis, field sampling support, and Agency efforts to build Tribal capacity for environmental monitoring and assessment. The RS&T program provides in-house expertise and technical capabilities in the generation of data for Agency decisions. RS&T organizations support the development of critical and timely environmental data and data review activities in emerging situations.

FY 2009 Activities and Performance Plan:

In FY 2009, RS&T resources will support Regional implementation of the Agency's statutory mandates through: *field operations* for environmental sampling and monitoring; *Regional laboratories* for environmental analytical testing; *quality assurance* oversight and data management support; and *environmental laboratory accreditation*. Direct laboratory support also increases efficiencies in Regional program management and implementation.

The Agency will stay abreast of rapidly changing technologies (i.e., new software, instrumentation, and analytical capability such as Polymerase Chain Reaction Technology) that

allow EPA to analyze samples more cost effectively and/or detect lower levels of contaminants, and to assay new and emerging contaminants of concern, such as endocrine disruptors, perchlorate, mercury, and chemical weapons and their degradation products. In accordance with new policy directives, including those related to Homeland Security, the Agency will enhance laboratory capacity and capability to ensure that its laboratories implement critical environmental monitoring and surveillance systems, develop nationwide laboratory networks, and develop enhanced response, recovery and cleanup procedures.

The Agency recognizes the value of accredited labs and continues to work toward the accreditation of all of its labs. The National Environmental Laboratory Accreditation Conference/Program ensures continued confidence that our environmental testing laboratories at the Federal, state, local, private and academic levels are qualified to produce data supporting environmental compliance at all levels within the regulatory community. The Agency's Laboratory Competency Policy, established in 2004, requires all Agency laboratories to seek accreditation or equivalent external assessments, if no suitable accreditation program is available (such as for research activities). In FY 2009 Regional laboratories will sustain existing accreditations or seek accreditation, according to their approved Implementation Plan.

EPA's Regional laboratories contribute to various aspects of the Agency's PART measures in each of the major Agency programs. The Civil and Criminal Enforcement PART measures are supported through significant technical and analytical activities for civil enforcement, cases including the Resource Conservation and Recovery Act, Toxic Substances Control Act and Superfund programs. The laboratories analyze samples associated with a variety of activities including unpermitted discharges, illegal storage and/or disposal of hazardous wastes, and illegal dumping. Resulting data are then used by the Agency's Criminal Investigation Division and by Assistant U.S. Attorneys to support prosecution cases.

Laboratory equipment such as Standard Reference Photometers are used to ensure, for example, that the national network of ozone ambient monitors accurately measure ozone concentrations in support of Mobile Source and Air Toxics PART measures. Nearly 60 percent of the analyses performed by Regional laboratories support the cleanup of uncontrolled or abandoned hazardous waste sites associated with the Superfund program. Analytical support also is provided for identifying and assessing risks associated with pesticides and other high risk chemicals.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$118.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on a recalculation of base workforce costs.

- (-$100.0) This decrease represents anticipated savings accomplished through more efficient laboratory management and administrative practices, and automation changes that will encourage more economically efficient laboratory resource utilization.

- (+$18.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (-1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.

Statutory Authority:

CWA; CAA; TSCA; CERCLA; SDWA; PPA; RCRA; FIFRA.

Regulatory Innovation
Program Area: Legal / Science / Regulatory / Economic Review
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$22,498.4***	***$23,866.0***	***$21,327.0***	***$24,405.0***	***$3,078.0***
Total Budget Authority / Obligations	$22,498.4	$23,866.0	$21,327.0	$24,405.0	$3,078.0
Total Workyears	112.4	106.7	106.7	106.6	-0.1

Program Project Description:

Increasingly, complex environmental problems – such as poor water quality, rising levels of urban smog, and the need for cost effective solutions to national water infrastructure issues – require the Agency to find new ways to leverage partnership opportunities with states, local communities, and businesses to produce better environmental results at lower costs. The testing of innovative, new ideas and creative approaches is critical to continued environmental progress and to building the next generation of environmental protection – one that focuses more on results and less on process; emphasizes environmental protection, not just pollution control; and takes a comprehensive approach to environmental problem-solving that will lead to sustainable outcomes.

As EPA works collaboratively with external partners to test new approaches to environmental protection, the Agency has a responsibility to understand and act on the environmental results that its programs achieve. Moving towards a "results-driven organization," EPA needs to analyze performance information collected through established Agency processes and requirements in a timely manner and use the information to inform Agency decisions. Through performance analysis and program evaluation, the Agency will be able to integrate innovations and best practices into the way it does business.

Through public recognition, incentives, and help in overcoming regulatory barriers, the Agency promotes environmental stewardship in all parts of society. EPA encourages and enables companies, communities, individuals, and other governmental organizations to actively take responsibility for their environmental footprint and commit to improving environmental quality and achieving sustainable results. The Agency also supports and encourages efforts to improve environmental performance "beyond compliance" with regulatory requirements as a means to

achieve long-term, system-wide environmental protection goals. Through regulatory innovation, EPA is establishing the building blocks for a future, more effective system of environmental protection.

FY 2009 Activities and Performance Plan:

In FY 2009, Regulatory Innovation activities will include:[42]

National Environmental Performance Track: Performance Track recognizes and encourages private and public facilities to demonstrate strong environmental performance and achieve measurable results that go beyond current requirements. In FY 2009, the program will focus on meeting its three-year leadership goal of 550 members (current member total is 496); increase the program's business value for members and prospective members; implement incentives and provide information that enable facilities to reach higher levels of environmental performance; and focus further on achieving significant environmental results that reflect the Agency's priorities. The Performance Track program will improve the usability and breadth of performance information, implement national and regional challenge commitments, and leverage state environmental leadership programs by better aligning Performance Track with the approximately 22 similar state programs. (Total EPA cost, including salary is $7,175 thousand with 33 FTE.)

State Innovation Grants (SIG): These competitive grants provide resources to assist states in implementing system-wide innovative environmental protection strategies that are transferable to other states. Examples include establishment of recognition programs for environmental leaders, promotion of environmental management systems, and implementation of the Environmental Results Program model. The model is an integrated system of multi-media compliance assistance, self-certification, and statistically-based performance measurement. It helps small business sectors improve environmental performance and creates the means for more efficient oversight. In FY 2009, EPA anticipates making up to eight awards. Since 2002, EPA has supported 35 projects with grants awarded to 24 states through the State Innovation Grant program. (Total EPA cost, including salary is $3,008 thousand with 12 FTE.)

Innovative Pilot Testing: While State Innovation grants are the primary mechanism for the development and implementation of strategic innovations, pilot testing of promising new ideas is conducted through a variety of additional mechanisms. Examples include organizing the development and issuance of flexible air permits (in partnership with EPA's Air and Radiation program and Performance Track); providing technical assistance and information to states that are adopting, or considering, the Environmental Results Program as a means of regulating small sources; providing a forum for information-sharing among states experimenting with the use of environmental management systems (EMSs) in permits; and providing technical assistance to the states in evaluating the results of those experiments. (Total EPA cost, including salary $2,031 thousand with 15 FTE.)

Environmental Management Systems (EMS): EMSs are internal decisional tools that business and industry use to identify their "environmental footprint," and to reduce their environmental

[42] For more information, please see http://www.epa.gov/opei/.

impacts while increasing operating efficiency. EPA will provide leadership and coordination with other agencies, states, industry, and governmental organizations on promoting the widespread use of EMSs to protect the environment. EMS implementation supports the President's Management Agenda goal of improved efficiency and performance in the Federal government. EPA will strengthen national EMS implementation programs in several key sectors, including agribusiness, construction, shipbuilding and ports. (Total EPA cost, including salary is $1,600 thousand with 4 FTE.)

Sector Strategies Program: This program supports EPA's mission by developing comprehensive performance improvement strategies for major manufacturing and service sectors of the U.S. economy, designed to promote widespread environmental gains with reduced administrative burden. In FY 2009, there will be at least 13 participating sectors, including agribusiness; chemical manufacturing; construction; pulp and paper; steel; oil and gas; and ports, representing more than 800,000 facilities nationwide. The program will focus greater attention on priority issues such as energy production and efficiency, greenhouse gas emissions, and material recovery/reuse. The program will reduce performance barriers and promote industry-wide stewardship initiatives, such as the Mercury Switch Removal Program. The program will enhance its strong focus on environmental results through expanded analysis of sector-wide trends, presented in *Sector Strategies Performance Reports*. (Total EPA cost, including salary is $3,316 thousand with 14.9 FTE.)

Program Evaluation and Performance Analysis: Resources are consolidated for program evaluation to help assess whether program outputs are leading to desired outcomes and promoting continuous program improvement. In FY 2009, through an annual Program Evaluation Competition managed by the National Center for Environmental Innovation, resources will be provided to EPA programs and Regional offices to conduct evaluations of priority programs. Specific consideration is given to evaluations that further the Government Performance and Results Act, Program Assessment Rating Tool (PART) and innovation priorities. Program evaluation and performance measurement capacity are also built through performance management training provided to EPA staff and managers. Performance analysis helps the Agency answer the questions of "what," "how," and "why" related to program performance: what are others achieving; how are they achieving them; and why are some achieving better results than. (Total EPA cost, including salary is $2,555 thousand with 7.7 FTE.)

Building Stronger Communities: The Smart Growth program achieves measurably improved environmental and economic outcomes by working with states, communities, industry leaders, and nonprofit organizations to minimize the environmental impacts of development. The program provides tools, technical assistance, education, and research to help states and communities grow in ways that minimize environmental and health impacts of development patterns and practices. The Smart Growth program shows community and government leaders how they can meet environmental standards through innovative community design and identifies and researches new policy initiatives to support environmentally friendly development patterns. EPA engages the architecture, transportation, construction, residential and commercial real estate industries to identify and remove barriers to growth and to improve the economy, community, public health, and the environment. In FY 2009, EPA plans to build upon its work in outreach

and direct implementation assistance. EPA will provide national best practices to communities and use its local, on-the-ground work to communicate its national research and policy agenda. EPA has identified four areas as offering the greatest potential for strategic environmental returns: (1) state and local Governments; (2) standard-setting organizations; (3) Federal government; and, (4) the Private Sector. (Total EPA cost including salary is $2,817 thousand with 14.9 FTE.)

Environmental Stewardship: EPA will continue activities that more fully engage all parts of society (businesses, communities, all levels of governments, and individuals) in actions that improve environmental quality and achieve sustainable results. As a follow-up to the White House Conference on Cooperative Conservation, EPA has overall Federal leadership for: (1) assessing legal authorities that hinder collaborative approaches, (2) seeking ways to improve implementation of the Federal Advisory Committee Act to gain multi-stakeholder consensus on controversial issues, and (3) providing information to assist in improving public engagement in controversial and complex environmental issues that need resolution in a geographic area. EPA plans to improve the management of its partnership programs through technical support, training and skill building around program design, measurement, and evaluation. Additional support will be provided to Agency stewardship priorities – for design and operation of site-specific projects in the regions, and for incorporation in national program policies. (Total EPA cost, including salary is $1,903 thousand with 8 FTE.)

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	75 percent of innovation projects completed under the SIG program will achieve, on average, 8 percent or greater implementation in environmental results for sectors and facilities involved, or 5 percent or greater implementation in cost-effectiveness & efficiency.			75	75	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce hazardous materials use at Performance Track facilities.			10,000	10,000	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce water use at Performance Track facilities.			3,900,000,000	3,900,000,000	Gallons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce combined NOx, SOx, VOC and PM emissions at Performance Track facilities.			4,000	4,000	Tons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce production of greenhouse gases at Performance Track facilities.			175,000	175,000	MTCO2E

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduce toxic releases to water at Performance Track facilities.			220	220	Tons

Work under this program supports EPA's Objective 5.2: Improve Environmental Performance Through Pollution Prevention and Other Stewardship Practices.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$465.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$800.0) These resources are consolidated from across the Agency to create a central coordination point to support the development of a robust evaluation capability in performance management.
- (-$880.0) This decrease reflects the integration of regulatory innovation and other collaborative partnerships into existing programs throughout the Agency. In FY 2009, the Agency also will shift its Sector Strategies focus and resources to larger business sectors, and will reduce the annual number of State Innovation grants awarded.
- (+$2,355.0) This change reflects the restoration of a reduction directed by Congress for FY 2008. The restored resources will provide tools, technical assistance, education, and

research to help states and communities grow in ways that minimize environmental and health impacts of development patterns and practices.

- (+$338.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funding will support the innovation program.

- (-0.1 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

Annual Appropriations Acts; CWA, Section 104(b)(3); CAA, Section 104(b)(3).

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$17,755.0***	***$20,104.0***	***$16,381.0***	***$20,588.0***	***$4,207.0***
Total Budget Authority / Obligations	$17,755.0	$20,104.0	$16,381.0	$20,588.0	$4,207.0
Total Workyears	99.4	104.2	104.2	104.2	0.0

Program Project Description:

EPA's regulations and programs have far-ranging impacts and must be based on the best possible analyses. The Regulatory Economic, Management and Analysis program is designed to strengthen EPA's policy and program analysis, and ensure EPA's managers are provided with timely regulatory, policy and program management information. Activities are designed to ensure that the Administrator and other senior EPA leaders have sound analyses for decision-making. The program works to fill gaps in EPA's ability to quantify the costs and benefits of environmental regulations and policies and improve operations and outcomes based on program and performance analyses. Resources are used to develop and analyze various regulatory and non-regulatory approaches; develop and evaluate policy options; identify successful approaches; address priority problem areas; and to target specific areas of concern, such as small businesses. A particular area of emphasis is providing management information on regulation and policy development and program management to ensure better managerial accountability. An increased effort will be placed on improving program operations.

Objectives of the program include:

- Ensuring that Agency decision-making processes are invested with high quality and timely information so that appropriate consideration is given to all relevant science, economic, and policy factors and to ensure consideration of an appropriate range of alternatives to achieve the best overall environmental results.

- Advancing the theory and practice of quality economics, and promoting policy analysis and risk analysis within the Agency.

- Providing information on the full societal impacts of reducing environmental risks, including the costs and benefits of regulatory options.

- Supporting the development of regulatory and policy alternatives, especially economic incentives as an environmental management tool.

- Confirming and maintaining the accuracy and consistency of EPA's economic analyses, while promoting the use of economic, science, regulatory and program analysis to inform management decisions throughout the Agency.

- Leading Agency implementation of the Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), and advocating for appropriate Small Business outreach and accommodation in EPA rulemaking to address unnecessary burdens on small entities.

- Promoting appropriate implementation of the Administrative Procedure Act and the Paperwork Reduction Act.

FY 2009 Activities and Performance Plan:

Program activities planned for FY 2009 include:

- Participating in the development of the Administrator's priority actions, reviewing economic and risk analyses conducted across EPA offices, and providing technical assistance when needed to help meet Agency goals. The Agency also will continue to chair the Small Business Advocacy Panels.

- Conducting and supporting research on methods to improve the quality and quantity of economic science available to inform the Agency's decision-makers, including management of the Science to Achieve Results in the Economic and Decision Sciences research program. Research priorities include estimation of the economic value of improvements in human health and welfare, integration of ecological and economic models to value improvements in ecological functions and services and improvements in other data collection techniques used to measure economic costs and benefits. The Agency also will establish effective management systems to improve the quality and consistency of EPA's economic and risk assessment studies.

- Supporting data collection and the dissemination of information on the economic benefits, costs and impact of environmental regulations, including for example, examining pollution abatement and control expenditures by U.S. manufacturing industries.[43]

- Providing training on the Agency's Action Development process, Economic Analysis Guidelines and related requirements (e.g., OMB Circular A-4). EPA will review and revise its economic guidelines so that they remain current with advancements and reflect best practices in the profession.[44]

[43] Please refer to: http://www.census.gov/econ/overview/mu1100.html
[44] Please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html;

- Facilitating communication between the scientific community and Agency policy analysts by supporting workshops on priority economic and environmental policy issues, (e.g., benefits valuation, market mechanisms and incentives, and treatment of uncertainties in risk and economic analyses[45]). Support the utilization of high-quality outside technical peer review of influential economic models and methods used in Agency regulations.

- Improving the availability of management information.

- Conducting program analysis and seeking to improve operations and environment outcomes.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$353.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$3,553.0) This change reflects the restoration of a reduction taken to this program directed by Congress in FY 2008. Funding is needed to support research on methods to improve the quality and quantity of economic science available Agency's decision-makers.

- (+$301.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

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 USC 40(IV)(2761), 42 USC 82(VIII)(6981-6983)); CAA: 42 USC 85(I)(A)(7403, 7412, 7429, 7545, 7612); CERCLA: 42 USC 103(III)(9651); PPA (42 U.S.C. 13101-13109); FTTA.

[45] For more information on these workshops, please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/WorkshopSeries.html.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$4,983.3***	***$4,790.0***	***$4,727.0***	***$5,083.0***	***$356.0***
Total Budget Authority / Obligations	$4,983.3	$4,790.0	$4,727.0	$5,083.0	$356.0
Total Workyears	25.6	22.3	22.3	22.3	0.0

Program Project Description:

To ensure that EPA's scientific and technical products are of the highest quality, the Agency's Science Advisory Board (SAB) provides independent, in-depth peer review of EPA's analyses and methods. The Board draws on a balanced range of non-EPA scientists and technical specialists from academia, communities, states, independent research institutions, and industry. This program provides administrative support to the SAB and two other statutorily mandated chartered Federal Advisory Committees, the Clean Air Scientific Advisory Committee, and the Advisory Council on Clean Air Compliance Analysis. These Advisory committees are charged with providing EPA's Administrator with independent advice and peer review on scientific and technical aspects of environmental problems, regulations and research planning.[46]

FY 2009 Activities and Performance Plan:

The Agency brings all of its important scientific products to the SAB as well as emerging and challenging research issues. In FY 2009, the Board will provide scientific and technical advice on 20 key topical areas related to: (1) the technical basis of EPA national standards for air pollutants and water contaminants; (2) risk assessments of major environmental contaminants; (3) economic benefits analyses of EPA's environmental programs; and (4) EPA's research and science programs.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

[46] Please refer to: http://www.epa.gov/sab/.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$250.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$106.0) This change reflects the restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

ERDDAA; 42 U.S.C. § 4365; FACA, 5 U.S.C. App. C; CAA Amendments of 1977; 42 U.S.C. 7409(d)(2); CAA Amendments of 1990; 42 U.S.C. 7612.

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$327,954.1***	***$303,728.0***	***$297,189.0***	***$311,068.0***	***$13,879.0***
Science & Technology	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Building and Facilities	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Leaking Underground Storage Tanks	$848.5	$901.0	$887.0	$902.0	$15.0
Oil Spill Response	$500.4	$490.0	$488.0	$496.0	$8.0
Hazardous Substance Superfund	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

EPM resources in the Facilities Infrastructure and Operations program are used to fund rent, utilities, and security, and also to manage activities and support services in many centralized administrative areas at EPA. These include health and safety, environmental compliance, occupational health, medical monitoring, fitness/wellness, and environmental management functions. Resources for this program also support a full range of ongoing facilities management services, including facilities maintenance and operations; Headquarters security; space planning; shipping and receiving; property management; printing and reproduction; mail management; and transportation services. Because this program supports the entire agency, funds are included in most appropriations. Because this program supports the entire Agency, funds are included in most appropriations.

FY 2009 Activities and Performance Plan:

For FY 2009, the Agency is requesting a total of $164,866 thousand for rent; $11,333 thousand for utilities; $25,676 thousand for security; $9,381 thousand for transit subsidy; and $6,437 thousand for regional moves in the EPM appropriation. The Agency also will continue to manage its lease agreements with General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct. The Agency reviews space needs on a regular basis, and is developing a long-term space consolidation plan

that includes reducing the number of occupied facilities, consolidating space within the remaining facilities, and reducing the square footage where practical.

These resources also help to improve operating efficiency and encourage the use of new, advanced technologies and energy sources. EPA will continue to direct resources towards acquiring alternative fuel vehicles and more fuel-efficient passenger cars and light trucks to meet the goals set by Executive Order (EO) 13423[47], *Strengthening Federal Environmental, Energy, and Transportation Management*. Additionally, the Agency will attain the Executive Order's goals through several initiatives, including comprehensive facility energy audits; re-commissioning; 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; green power purchases; and the use of Energy Star rated products and buildings. In FY 2009, we plan to reduce energy utilization (or improve energy efficiency) by approximately 190.5 billion British Thermal Units. Based on current energy rates and including an inflation factor of 4 percent we estimate a net savings to the Agency of approximately $1.84 million.

EPA will provide transit subsidy to eligible applicants as directed by EO 13150[48] *Federal Workforce Transportation.* EPA will continue its integration of Environmental Management Systems (EMS) across the Agency, consistent with requirements of Executive Order 13423[49]. EPA will advance the implementation of Safety and Health Management Systems to identify and mitigate potential safety and health risks in the workplace to ensure a safe working environment.

Further, the Agency's Protection Services Detail (PSD) provides physical protection of the Administrator, by coordinating security arrangements during routine daily activities, as well as in-town and out-of-town events. The PSD coordinates all personnel and logistical requirements (i.e., scheduling, local support, travel arrangements, special equipment) needed to carry out its protective function.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percentage reduction in energy consumption.	9	6	9	12	Percent

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$334.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$204.0) This reflects an increase in resources for transit subsidy.

[47] Information available at http://www.fedcenter.gov/programs/eo13423/
[48] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html
[49] Information available at http://www.fedcenter.gov/programs/eo13423/

- (+$3,605.0) This increase reflects the net of projected savings in rent and the restoration of Congressionally directed cut in fixed costs as well as the 1.56% rescission in FY 2008 Omnibus. These funds will fund the projected contractual rent increases in FY 2009.

- (+$3,251.0) This increase will provide additional resources for increases in utility costs. This total includes the restoration of the 1.56% rescission to all program projects.

- (+$727.0) This increase will provide additional resources for increases in security costs. This total includes the restoration of the 1.56% rescission to all program projects.

- (+$1,620.0) This change reflects the balance of the 1.56% rescission to all program projects resources requested that are used to fund priority facility support costs.

- (+$1,676.0) This represents an increase in funding for IT and telecommunication resources.

- (-18.8 FTE) This change reflects transfers to the Human Resources program, in response to an increased workload in human capital and human resources; a transfer of Competitive Sourcing functions to the Acquisition Management program (4.0 FTE); and a transfer of workforce mediation functions and the Human Resources program (4.0 FTE).

- (+$1,461.0/ +9.0 FTE) This increase reflects the net base workforce cost for a shift of 9.0 FTE for the Protection Services Detail.

- (+$1,001.0) This increase shifts non-payroll dollars for the Protection Services Detail, which provides physical protection to the EPA Administrator. These resources will be consolidated with other Agency security resources in the Facilities Infrastructure and Operations program project. Resources are being consolidated from other program projects. This is a zero sum transaction.

Statutory Authority:

Federal Property and Administration Services Act; Public Building Act; Annual Appropriations Act; Robert T. Stafford Disaster Relief and Emergency Assistance Act; CWA; CAA; RCRA; TSCA; NEPA; CERFA; D.C. Recycling Act of 1988; EPACT of 2005; Executive Orders 10577, 12598, 13150 and 13423; Emergency Support Functions (ESF) #10 Oil and Hazardous Materials Response Annex; Department of Justice United States Marshals Service, Vulnerability Assessment of Federal Facilities Report; Presidential Decision Directive 63 (Critical Infrastructure Protection).

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$64,431.2***	***$74,960.0***	***$73,949.0***	***$80,623.0***	***$6,674.0***
Leaking Underground Storage Tanks	$812.6	$1,102.0	$1,085.0	$1,131.0	$46.0
Hazardous Substance Superfund	$20,428.7	$24,306.0	$24,008.0	$26,102.0	$2,094.0
Total Budget Authority / Obligations	$85,672.5	$100,368.0	$99,042.0	$107,856.0	$8,814.0
Total Workyears	519.9	530.0	530.0	538.1	8.1

Program Project Description:

Activities under the Central Planning, Budgeting and Finance program support the management of integrated planning, budgeting, financial management, performance and accountability processes and systems to ensure effective stewardship of resources. Also included is EPA's Environmental Finance Program that provides grants to a network of university-based Environmental Finance Centers which deliver financial outreach services, such as technical assistance, training, expert advice, finance education, and full cost pricing analysis to states, local communities and small businesses. (Refer to http://www.epa.gov/ocfo/functions.htm for additional information).

FY 2009 Activities and Performance Plan:

The Agency works to ensure sound financial and budgetary management through the use of routine and ad hoc analysis, statistical sampling and other evaluation tools. In addition, more structured and more targeted use of performance measurements has led to better understanding of program impacts as well as leverage points to increase effectiveness.

EPA will continue efforts to modernize the Agency's financial systems and business processes. The Agency is working to replace its legacy accounting system and related modules with a new system certified to meet the latest government accounting standards. This extensive modernization effort will allow the Agency to improve efficiency and automate quality control functions to simplify use of the system as well as comply with Congressional direction and new Federal financial systems requirements. This work is framed by the Agency's Enterprise Architecture and will make maximum use of enabling technologies for e-Gov initiatives including e-Procurement, e-Payroll, and e-Travel.

EPA plans further improvements to its budgeting and planning system, financial data warehouse, business intelligence tools and reporting capabilities. These improvements will support EPA's "green" score in financial performance on the President's Management Agenda (PMA) scorecard by providing more accessible data to support accountability, cost accounting, budget and performance integration, and management decision-making.

In FY 2009, EPA will continue to strengthen its accountability and effectiveness of operations through improved coordination and integration of internal control assessments as required under Revised OMB Circular A-123. Improvements in internal controls will further support EPA's PMA initiatives for improved financial performance.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,666.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$3,520.0) This increase is to cover revised estimates of the expected FY 2009 expenditures for the Financial Replacement System (FinRS) Capital Investment project.
- (+$1,488.0) This change reflects restoration of the 1.56% rescission to all program projects combined with small technical changes such as realignment of IT, travel, or other support costs across programs. The restored funds will support continuity in provision of the financial services for the Agency and baseline financial systems operations.
- (+6.4 FTE[50]) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. The increased FTE will support the Agency's Presidential Management Agenda efforts in the areas of Budget Planning and Integration, Financial Management.

Statutory Authority:

Annual Appropriations Act; CCA; CERCLA; CSA; E-Government Act of 2002; EFOIA; EPA's Environmental Statutes, and the FGCAA; FAIR; Federal Acquisition Regulations, contract law and EPA's Assistance Regulations (40 CFR Parts 30, 31, 35, 40,45,46, 47); FMFIA(1982); FOIA; GMRA(1994); IPIA; IGA of 1978 and Amendments of 1988; PRA; PR; CFOA (1990); GPRA (1993); The Prompt Payment Act (1982); Title 5, USC; National Defense Authorization Act.

[50] The total increase in workyears for this program, as shown in the resource table above, includes two reimbursable FTE for e-Relocation services provided by EPA on behalf of other Federal agencies

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(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$23,654.1***	***$29,992.0***	***$28,629.0***	***$31,195.0***	***$2,566.0***
Leaking Underground Storage Tanks	$223.1	$165.0	$162.0	$165.0	$3.0
Hazardous Substance Superfund	$19,129.3	$24,645.0	$24,327.0	$24,985.0	$658.0
Total Budget Authority / Obligations	$43,006.5	$54,802.0	$53,118.0	$56,345.0	$3,227.0
Total Workyears	340.9	357.3	357.3	362.9	5.6

Program Project Description:

EPM resources in this program support contract and acquisition management activities at Headquarters, Regional Offices, Research Triangle Park, North Carolina, and Cincinnati, facilities. Sound contract management fosters efficiency and effectiveness assisting all of EPA's programs. EPA focuses on maintaining a high level of integrity in the management of its procurement activities, and in fostering relationships with state and local governments, to support the implementation of environmental programs.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to implement its new acquisition system, scheduled to be deployed in FY 2010. The current Acquisition Management System has reached the end of its useful life. Staff increasingly spends time making the system work as opposed to using the system to accomplish their work. Further, the system itself is obsolete; and therefore an upgrade is not cost-efficient.

The new system will provide the Agency with a better, more comprehensive way to manage data on contracts that support mission-oriented planning and evaluation. This will allow the Agency to reach the President's Management Agenda (PMA) goals, E-Government (E-Gov) requirements, and the needs of Agency personnel, resulting in more efficient process implementation. The benefits of the new system are: (1) program offices will be able to track the progress of individual actions; (2) extensive querying and reporting capabilities will allow the Agency to meet internal and external demands, and (3) the system will integrate with the Agency's financial systems and government-wide shared services.

In addition, the Agency will utilize the Integrated Acquisition Environment (IAE), an E-Gov initiative that creates a secure business model that facilitates and supports cost-effective acquisition of goods and services by Federal agencies, while eliminating inefficiencies in the current acquisition environment. The program will also continue to implement new training requirements associated with the IAE and the new acquisition system.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,264.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$90.0) This provides funding for the E-Government initiative Integrated Acquisition Environment—Loans and Grants.
- (+$25.0) This increases funding for the EPA's Acquisition E-Government initiative.
- (+$187.0) This change reflects the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support the implementation of the acquisition management system.
- (+9.6 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. The change includes a transfer of Competitive Sourcing functions from the Facilities, Infrastructure and Operations program, as well a realignment of Regional contract management workload.

Statutory Authority:

EPA's Environmental Statutes; annual Appropriations Acts; FAR.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$20,564.5***	***$23,439.0***	***$23,242.0***	***$25,977.0***	***$2,735.0***
Hazardous Substance Superfund	$2,671.4	$3,049.0	$3,001.0	$3,116.0	$115.0
Total Budget Authority / Obligations	$23,235.9	$26,488.0	$26,243.0	$29,093.0	$2,850.0
Total Workyears	169.2	177.5	177.5	177.5	0.0

Program Project Description:

Grants and Interagency Agreements comprise over half of the Agency's budget. EPM resources in this program support activities related to the management of Financial Assistance Grants/Interagency Agreements (IAGs), and of suspension and debarment at Headquarters and within Regional offices. The key components of this program are ensuring that EPA's management of grants and IAGs meets the highest fiduciary standards, and that grant funding produces measurable environmental results. This program focuses on maintaining a high level of integrity in the management of EPA's assistance agreements, and fostering relationships with state and local governments to support the implementation of environmental programs.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will achieve key objectives under its long-term Grants Management Plan. [51] These objectives include strengthening accountability, competition and positive, measurable environmental outcomes, and aggressively implementing new and revised policies on at-risk grantees. The Grants Management Plan has provided a framework for extensive improvements in grants management at the technical administrative level, programmatic oversight level and at the executive decision-making level of the Agency. EPA will continue to reform grants management by conducting on-site and pre-award reviews of grant recipients and applicants, by improving systems support, by performing indirect cost rate reviews, by providing Tribal technical assistance, and by implementing its Agency wide training program for project officers, grant specialists, and managers. EPA also will continue to streamline Grants Management through the E-Government initiative Grants Management Line of Business (GM LoB). GM LoB

[51] US EPA, *EPA Grants Management Plan.* EPA-216-R-03-001, April 2003, http://www.epa.gov/ogd/EO/finalreport.pdf.

offers government-wide solutions to grants management activities that promote citizen access, customer service, and agency financial and technical stewardship.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from the FY 2008 Enacted Budget (Dollars in Thousands):

- (+$970.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$1,550.0) This increase provides additional funding for the Grant Management Line of Business initiative, a government-wide solution to support end-to-end grants management activities that promote citizen access, customer service, and agency financial and technical stewardship. Funds are included to support modernization of current systems to accommodate new linkages.

- (+$215.0) This change reflects restoration of the 1.56% rescission to all program projects combined with small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; FGCAA; Section 40 CFR Parts 30, 31, 35, 40, 45, 46, and 47.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$39,740.2***	***$40,175.0***	***$39,760.0***	***$43,646.0***	***$3,886.0***
Leaking Underground Storage Tanks	$3.0	$3.0	$3.0	$3.0	$0.0
Hazardous Substance Superfund	$5,203.0	$5,036.0	$4,969.0	$5,063.0	$94.0
Total Budget Authority / Obligations	$44,946.2	$45,214.0	$44,732.0	$48,712.0	$3,980.0
Total Workyears	298.6	296.3	296.3	304.6	8.3

Program Project Description:

EPM resources in this program support activities related to the provision of human capital and human resources management services to the entire Agency. The Agency continually evaluates and improves human resource and workforce functions, employee development, leadership development, workforce planning, and succession management.

FY 2009 Activities and Highlights:

In FY 2009, the Agency will continue its efforts to strengthen its workforce by focusing on key areas to further develop our existing talent, and by strengthening our recruitment and hiring programs. EPA also remains committed to fully implementing *EPA's Strategy for Human Capital* [52], which was issued in December 2003 and updated in 2005. As result of that review, the desired outcomes for each strategy were strengthened to focus on measurable results. In FY 2009, the Agency will continue its efforts to implement a Workforce Planning System:

- Closing competency gaps for Toxicology, Information Technology, Human Resources, Grant and Contract specialist positions, as well as leadership positions throughout the Agency.

- Shortening the hiring timeframes for the senior executives and non-SES positions through improved automation and enhancements to application process.

[52] US EPA, *Investing in Our People II, EPA's Strategy for Human Capital.* Available at http://www.epa.gov/oarm/strategy.pdf

- Implementing innovative recruitment and hiring flexibilities that address personnel shortages in mission-critical occupations.

In FY 2009, the Agency will fully implement the Leadership and Professional Development Rotation Program (LPDRP), and the SES Mobility Program. The LPDRP provides employees with new perspectives on the work performed within EPA. The program will provide rotational opportunities for permanent EPA employees in grades GS-13 through GS-15 in order to create a versatile workforce that supports planning and strategic goals. The SES Mobility Program provides SES corps with opportunities to collaborate with seasoned executives in order to enhance leadership development skills.

As part of these activities, EPA will improve the effectiveness and efficiency of Agency human resources operations by establishing Shared Service Centers. These Shared Service Centers will process personnel and benefits actions for EPA's 17,000 employees, as well as vacancy announcements. The establishment of Human Resources Shared Service Centers reflects EPA's ongoing commitment to improve the effectiveness and efficiency of Agency operations. The Centers will enhance the timeliness and quality of customer service and standardize work processes.

In addition, EPA will continue to streamline human resources management by employing the E-gov initiative, Human Resources Line of Business (HR LoB). HR LoB offers government-wide, cost effective, standardized and interoperable HR solutions while providing core functionality to support the strategic management of Human Capital.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days	28	45	45	45	Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	For SES positions, the average time from date vacancy closes to date offer is extended, expressed in working days	66	90	73	68	Days

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Agency Managers' satisfaction with the initial stages of the human resources hiring process, as measured by the average score across 4 questions in the OPM Management Hiring Satisfaction Survey.				90	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Maintenance and improvement of MCO employee competencies, as measured by proficiency levels of competencies in MCO's re-assessed in 2009.				80	Percent

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,869.0) This reflects an increase for payroll and cost of living for all FTE. This includes an increase for the Agency's rising workers compensation unemployment cost.

- (+$500.0) This increase reflects the establishment of a permanent SES Mobility Program that will strengthen succession planning and support the Agency's workforce planning efforts.

- (+$500.0) This increase reflects the establishment of the Leadership Development Rotation program, as part of a development program for GS-13, -14 and -15 level employees.

- (-$500.0) This reflects a realignment of resources which, as part of a management strategy, will help EPA to better align resources with Agency high priority programs.

- (+$50.0) This provides funding for the E-Government initiative Electronic Official Personal Files (E-OPF).

- (+$467.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support human resources operations and policy efforts.

- (+8.3 FTE) This change reflects an increase in human resources and human capital management activities at EPA's Research Triangle Park, North Carolina, office, as well as a transfer of the Agency's Workforce Solutions program staff from the Facilities, Infrastructure and Operations program.

Statutory Authority:

Title V United States Code.

Program Area: Pesticides Licensing

Pesticides: Protect Human Health from Pesticide Risk
Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$0.0***	***$62,514.0***	***$61,819.0***	***$60,606.0***	***($1,213.0)***
Science & Technology	$0.0	$3,294.0	$3,250.0	$3,453.0	$203.0
Total Budget Authority / Obligations	$0.0	$65,808.0	$65,069.0	$64,059.0	($1,010.0)
Total Workyears	0.0	488.5	488.5	477.3	-11.2

Program Project Description:

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), section 3(c)(5), states that the Administrator shall register a pesticide if it is determined that, when used in accordance with labeling and common practices, the product "will not generally cause unreasonable adverse effects on the environment." Further, FIFRA defines "unreasonable adverse effects on the environment" as "any unreasonable risk to man or the environment."

EPA's Pesticide program evaluates, assesses and reviews new pesticides before they reach the market and ensures that pesticides already in commerce are safe.[53] Under FIFRA, the Federal Food, Drug, and Cosmetic Act (FFDCA), and the Food Quality Act of 1996 that amended FIFRA and FFDCA, EPA is responsible for registration, and registration review of pesticides to protect consumers, pesticide users, workers who may be exposed to pesticides, children, and other sensitive populations. To make registration, and registration review decisions, EPA must balance the risks and benefits of using the pesticide. In establishing tolerances, or the maximum allowable pesticide residues on food or feed, EPA must consider cumulative and aggregate risks and ensure additional protection for children.

EPA began promoting reduced risk pesticides in 1993 by giving registration priority to pesticides that will have low impact on human health; low toxicity to non-target birds, fish, and plants; low potential for contaminating ground water; lower use rates; low pest resistance potential; and that also comport with Integrated Pest Management (IPM) approaches.[54] Several countries and international organizations have instituted programs to facilitate registering reduced risk pesticides. EPA works with the international scientific community and Organization for Economic Cooperation and Development (OECD) member countries to register 12 new reduced-

[53] See U.S. Environmental Protection Agency, Pesticides internet site: http://www.epa.gov/pesticides/. Washington, DC: Office of Pesticide Programs.

[54] See U.S. Environmental Protection Agency, Pesticides: Health and Safety, Reducing Pesticide Risk internet site: http://www.epa.gov/pesticides/health/reducing.htm.

risk pesticides and to establish related tolerances (maximum residue limits). Through these efforts, EPA can help to reduce risks to Americans from foods imported from other countries.

EPA's regional offices provide frontline risk management that ensures the decisions made during EPA's registration and reevaluation processes are implemented in pesticide use. An estimated 1.8 million agricultural workers could be exposed to pesticides, and millions of individuals use pesticides in occupations such as lawn care, healthcare, food preparation, and landscape maintenance.[55] Each year, the risk assessments that EPA conducts yield extensive risk-management requirements for hundreds of pesticides and uses. EPA continues to reduce the number and severity of pesticide exposure incidents by promulgating regulations under the Worker Protection Standard, training and certifying pesticide applicators, assessing and managing risks, and developing effective communication and outreach programs.

FY 2009 Activities and Performance Plan:

During 2009, EPA will continue to review and register new pesticides, new uses for existing pesticides, and other registration requests in accordance with FQPA standards and Pesticide Registration Improvement Renewal Act (PRIA 2) timeframes. EPA will continue to process these registration requests, with special consideration given to susceptible populations, especially children. Specifically, EPA will focus special attention on the foods commonly eaten by children, to reduce pesticide exposure to children where the science identifies potential concerns. Pesticide registration actions will continue to evaluate pesticide products before they enter the market.[56] EPA will review pesticide data and implement use restrictions and instructions needed to ensure that pesticides used according to label directions will not result in unreasonable risk. During its pre-market review, EPA will consider human health and environmental concerns as well as the pesticide's potential benefits.

In 2009, EPA will begin the review of 70 pesticides and complete final work plans for 60 through the Registration Review Program, and continue the review of pesticides for which dockets were opened and final work plans were completed in earlier years. Through Registration Review and REDe implementation, EPA will continue to ensure that pesticides meet current scientific standards and address concerns identified after the original registration.[57] The goal of the Registration Review program is to review pesticide registrations every 15 years to ensure that they meet the most current standards. As the program is implemented, EPA will continue to maintain the Agency's goal of ensuring that pesticides in the marketplace meet the latest health

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[55] U.S. Department of Labor. March 2005. *Findings from the National Agricultural Workers Survey (NAWS) 2001 - 2002. A Demographic and Employment Profile of United States Farm Workers*, Research Report No. 9, Washington, DC: Office of the Assistant Secretary for Policy, Office of Programmatic Policy. Available on the internet at: http://www.doleta.gov/agworker/naws.cfm.

[56] See U.S. Environmental Protection Agency, Pesticides: Topical & Chemical Fact Sheets, Pesticide Registration Program internet site: http://www.epa.gov/pesticides/factsheets/registration.htm.

[57] See U.S. Environmental Protection Agency, Pesticide Tolerance Reassessment and Reregistration internet site: www.epa.gov/pesticides/reregistration.

and safety standards. Registration review will operate continuously, encompassing all registered pesticides.

The Agency will continue to ramp-up the Registration Review program and implement Reregistration Eligibility Decisions (REDs) associated with assessing human health. As part of RED implementation, EPA will continue to address activities vital to effective "real world" implementation of the RED requirements. These activities include reviewing product label amendments that incorporate the mitigation from the REDs; publishing proposed and final product cancellations; implementing memoranda of agreements designed to provide fast/effective risk reduction; and approving product reregistrations. The Agency also will complete certain proposed and final tolerance rulemakings to implement the changes in tolerances and revocations required in the REDs. The end result of these activities is protecting human health by implementing statutes and taking regulatory actions to ensure pesticides continue to be safe and available when used in accordance with the label.

EPA staff will continue to provide locally based technical assistance and guidance to states and tribes on implementation of pesticide decisions. Issues addressed will include newer/safer products and improved outreach and education. Technical assistance will include workshops, demonstration projects, briefings, and informational meetings in areas including pesticide safety training and use of lower risk pesticides.

EPA will engage the public, the scientific community and other stakeholders in its policy development and implementation to encourage a reasonable transition for farmers and others from the older, more potentially hazardous pesticides to the newer pesticides that have been registered using the latest available scientific information. The Agency will continue to update the pesticide review and use policies to ensure compliance with the latest scientific methods. EPA also will continue its emphasis on the registration of reduced risk pesticides, including biopesticides, in order to provide farmers and other pesticide users with new alternatives. In FY 2009, the Agency, in collaboration with the United States Department of Agriculture, will continue to work to ensure that minor use registrations receive appropriate support. EPA also will ensure that needs are met for reduced risk pesticides for minor use crops. EPA will assist farmers and other pesticide users in learning about new, safer products and methods of using existing products through workshops, demonstrations, small grants and materials available on the web site and in print.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Incidents per 100,000 potential risk events in population occupationally exposed to pesticides.			<= 3.5/100,000	<= 3.5/100,000	Incid/100,000

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent reduction in review time for registration of conventional pesticides.	5	9	10	10	Percent Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Reduced cost per pesticide occupational incident avoided.			2	6	Percent Cum. Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent reduction in concentrations of pesticides detected in general population.	Data Avail 2008	18	18.5	19	Percent Cum. Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of agricultural acres treated with reduced-risk pesticides.				19	Percent Acre-Treatments

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with highest incident rate.		No Target Estab-lished	20	30	Percent Cum. Reduction

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$3,000.0 \ -9.2 FTE) This reduction reflects the completion of the non-food use Reregistration Eligibility Decisions (REDs) and transition to Registration Review in FY 2007. Through Registration Review, EPA is required to review each registered pesticide approximately every 15 years and this work can successfully be supported through increased Maintenance user fees.

- (+$352.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$1,930.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. This funding will support implementation of the Registration Review Program.

- (-$495.0) This change redirects regional grant resources to Realize Value of Pesticide Availability to better align with the new Pesticides budget structure.

- (-2.0 FTE) The adjustment redirects regional grant management resources to Realize Value of Pesticide Availability to better align with the new Pesticides budget structure.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; ESA; and FQPA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$0.0***	***$41,750.0***	***$41,214.0***	***$41,215.0***	***$1.0***
Science & Technology	$0.0	$2,115.0	$2,087.0	$2,216.0	$129.0
Total Budget Authority / Obligations	$0.0	$43,865.0	$43,301.0	$43,431.0	$130.0
Total Workyears	0.0	320.5	320.5	307.4	-13.1

Program Project Description:

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), section 3(c)(5), states that the Administrator shall register a pesticide if it is determined that, when used in accordance with labeling and common practices, the product "will not generally cause unreasonable adverse effects on the environment." Further, FIFRA defines "unreasonable adverse effects on the environment" as "any unreasonable risk to man or the environment."

Along with assessing the risks that pesticides pose to human health, EPA conducts ecological risk assessments to determine potential effects on plants, animals, and ecosystems. In addition to assessing and addressing potential risks to ecosystems and plants and animals that are not targets of the pesticide, the Agency has additional responsibilities under the Endangered Species Act (ESA).[58] Under FIFRA, EPA must determine that a pesticide is not likely to cause unreasonable adverse effects on the environment, taking into account the beneficial uses of a product. To ensure unreasonable risks are avoided, EPA may impose risk mitigation measures such as modifying use rates or application methods, restricting uses, or denying uses. In some regulatory decisions, EPA may determine that uncertainties in the risk determination need to be reduced and may subsequently require monitoring of environmental conditions, such as effects on water sources or the development and submission of additional laboratory or field study data by the pesticide registrant.[59]

Under ESA, EPA must ensure that pesticide regulatory decisions will not adversely modify critical habitat or jeopardize the continued existence of species listed by the U.S. Fish and Wildlife Service or National Marine Fisheries Service as threatened or endangered. Given approximately 600 active ingredients in more than 19,000 products—many of which have multiple uses—and approximately 1,200 listed species with diverse biologically-attributed

[58] The Endangered Species Act of 1973 sections 7(a)1 and 7 (a)2; Federal Agency Actions and Consultations, as amended (16 U.S.C. 1536(a)). Available at U.S. Fish and Wildlife Service, Endangered Species Act of 1973 internet site: http://www.fws.gov/endangered/esa.htm#Lnk07.

[59] Federal Insecticide, Fungicide and Rodenticide Act, as amended. January 23, 2004. Section 3(a), Requirement of Registration (7 U.S.C. 136a). Available online at www.epa.gov/opp0001/regulating/fifra/pdf.

habitat requirements and geographic range, this presents a great challenge. EPA works with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to establish an efficient process for carrying out our ESA obligations.

As a result of a lawsuit filed against the Services, The United States District Court for the Western District of Washington overturned the most critical aspects of EPA's initial attempt at regulation, including EPA's authority to make certain determinations without further consultation with the Services. EPA has made assessing potential risks to endangered species a priority and will continue to work with the Services to find efficiencies. EPA also has instituted processes to consider endangered species issues routinely in EPA reviews.

FY 2009 Activities and Performance Plan:

Reduced concentrations of pesticides in water sources indicate the efficacy of EPA's risk assessment, management, mitigation, and communication activities. Using sampling data collected under the U.S. Geological Survey (USGS) National Water Quality Assessment Program, EPA will monitor the impact of our regulatory decisions for four pesticides of concern—diazinon, chlorpyrifos, malathion, and azinphos-methyl—and consider whether any additional action is necessary.[60] In FY 2009 the Agency will continue to work with USGS to develop sampling plans and refine goals, and will ask USGS to add additional insecticides to sampling protocols and establish baselines for newer products that are replacing organophosphates, such as synthetic pyrethroids.

The water quality measure tracks reductions of concentrations for four organophosphate insecticides that most consistently exceeded EPA's levels of concerns for aquatic ecosystems during the last ten years of monitoring by the US Geological Survey (National-Water-Quality Assessment). EPA will meet goals for reducing the number of watersheds with exceedences for these pesticides through a combination of programmatic activities. Reregistration decisions and associated RED implementation for these four compounds will result in lower use rates and the elimination of certain uses that will directly contribute to reduced concentrations of these materials in the nation's waters.

While review of pesticides currently in the marketplace and implementation of the decisions made as a result of these reviews are a necessary aspect of meeting EPA's goals, they are not sufficient in and of themselves. Without having alternative products to these pesticides available to the consumer, the means to reach the goal would be significantly hampered. Consequently, the success of the registration program in ensuring lower risk and the availability of efficacious alternative products plays a large role in meeting the environmental outcome of improved aquatic ecosystem protection. EPA also will continue to assist pesticide users in learning about new, safer products and methods of using existing products through various means, including workshops, demonstrations, grants, printed materials and the Internet.

[60]Gilliom, R.J., et al. 2006. *The Quality of Our Nation's Waters: Pesticides in the Nation's Streams and Ground Water, 1992–2001*. Reston, Virginia: U.S. Geological Survey Circular 1291. 171p. Available on the internet at: http://pubs.usgs.gov/circ/2005/1291/.

Another program focus in FY 2009 will be providing for the continued protection of threatened or endangered species from pesticide use, while minimizing regulatory burdens on pesticide users. EPA will use sound science and best available data to assess the potential risk of pesticide exposure to listed species and will continue efforts with partners and stakeholders to improve complementary information and databases. As pesticides are reviewed throughout the course of the Registration Review cycle, databases that describe the location and characteristics of species, pesticides and crops will continually be refined with new information to help ensure consistent consideration of endangered species.

The Agency is shifting resources within the program to support continued compliance with the requirements of the Endangered Species Act. In FY 2009, EPA will integrate state-of-the science models, knowledge bases and analytic processes to increase productivity and better address the challenge of potential risks of specific pesticides to specific species. Interconnection of the various databases within the program office will provide improved support to the risk assessments during the registration review process by allowing risk assessors to analyze complex scenarios relative to endangered species.

EPA will continue to implement use limitations through appropriate label statements, referring pesticide users to EPA-developed Endangered Species Protection Bulletins which are available on the Internet via *Bulletins Live!* These bulletins will, as appropriate, contain maps of pesticide use limitation areas necessary to ensure protection of listed species and, therefore, EPA's compliance with the Endangered Species Act. Any such limitations on a pesticide's use will be enforceable under the misuse provisions of FIFRA. Bulletins are a critical mechanism for ensuring protection of endangered and threatened species from pesticide applications while minimizing the burden on agriculture and other pesticide users by limiting pesticide use in the smallest geographic area necessary to protect the species.

In FY 2009, 63 of the pesticides beginning Registration Review are expected to require comprehensive environmental assessments, including determining endangered species impacts. This may result in an expanded workload due to the necessity of issuing data call ins (DCIs) and conducting additional environmental assessments for pesticides already in the review pipeline.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Average cost and average time to produce or update an Endangered Species Bulletin.	No Target Estab-lished	10	19	28	Percent Cum. Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of urban watersheds that exceeds EPA aquatic life			25, 25, 30	20, 20, 25	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	benchmarks for three key pesticides of concern.					

Some of the measures for this program are program outputs, which, when finalized, represent the program's statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment, and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, they do provide a means for reducing risk in that the program's safety review prevents dangerous pesticides from entering the marketplace.

EPA goals for 2008 through 2010 will be refined when the USGS plan is finalized. With completion of the plan, USGS is currently developing final sampling plans for 2008 through 2017. Current draft plans call for yearly monitoring in four urban-dominated river/large stream watersheds and eight agricultural watersheds; bi-yearly sampling in twelve additional urban-dominated streams and three agricultural dominated watersheds; and sampling every four years in a second set of twelve urban-dominated stream watersheds and a second set of 25 agricultural watersheds. The sampling frequency for these 28 urban sites and 36 agricultural sites will range from approximately 15 to 35 site samples per year based on the watershed land-use class.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$2,000.0 \ -9.0 FTE) These funds have been diverted from Registration, Registration Review and RED Implementation actions to Endangered Species Act related work which is integral to supporting Registration Review. Diversion may impact annual and long-term strategic measures but can successfully be supported through increased user fees.

- (+$2,000.0) This increase supports continued compliance with the requirements of the Endangered Species Act including the integration of state-of-the science models, knowledge bases and analytic processes for risk assessors to analyze complex risk scenarios relative to endangered species.

- (-$550.0) This change redirects regional grant resources to the Realize Value of Pesticide Availability program to better align with the new Pesticides budget structure.

- (-4.1 FTE) The adjustment redirects regional resources to the Realize the Value of Pesticide Availability program from the Pesticide Human Health Risk program to better align with the new Pesticides budget structure.

- (-$512.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (+$1,063.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. These funds will support additional analysis for integrating Endangered Species Act considerations in the registration process.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; ESA; and FQPA.

Pesticides: Realize the Value of Pesticide Availability
Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$0.0***	***$12,114.0***	***$11,959.0***	***$12,870.0***	***$911.0***
Science & Technology	$0.0	$472.0	$465.0	$495.0	$30.0
Total Budget Authority / Obligations	$0.0	$12,586.0	$12,424.0	$13,365.0	$941.0
Total Workyears	0.0	90.4	90.4	93.7	3.3

Program Project Description:

Within the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the definition of "unreasonable adverse effects on the environments" expands upon the concept of protecting against unreasonable risks to man or the environment, by adding "taking into account the economic, social and environmental costs and benefits of the use of any pesticide…"

The Realize the Value of Pesticides Program focuses on ensuring that adequate pesticides are available both in emergency situations and through ongoing education and research in environmentally friendlier pest remediation methods. An example of actions that lead to these societal benefits are exemptions granted under FIFRA Section 18. In the event of an emergency, i.e., a severe pest infestation, FIFRA Section 18 provides EPA the authority to temporarily exempt certain pesticide uses from registration requirements. We must ensure that, under the very limiting provisions of the exemption, such emergency uses will not present an unreasonable risk to the environment. EPA's timely review of emergency exemptions has avoided an estimated $1.5 billion in crop losses per year. In such cases, EPA's goal is to complete the more detailed and comprehensive unreasonable risk review conducted for pesticide registration within three years.

The statute clearly recognizes that there will be societal benefits beyond protection of human health and the environment from the pesticide registration process that it establishes. For example, an estimated $900 million in termite damage is avoided each year through the availability of effective termiticides. While some effective termiticides have been removed from the market due to safety concerns, EPA continues to work with industry to register safe alternatives that meet or exceed all current safety standards and offer a high level of protection. Section 3 of FIFRA also authorizes EPA to register "me-too" products; that is, products that are identical or substantially similar to already-registered products. The entry of these new products, also known as "generics," into the market can cause price reductions resulting from new competition and broader access to products. These price declines generate competition that provides benefits to farmers and consumers.

EPA's Pesticide Environmental Stewardship Program's efforts to increase adoption of Integrated Pest Management (IPM) in schools has led to a documented 50 percent reduction in pest control costs as well as a 90 percent reduction in both pesticide applications and pest problems in participating schools. This "Monroe Model" serves as an example of how to implement IPM in school districts across the country. The Monroe Model is based on a case in Monroe County, Indiana which achieved a 92 percent reduction in pesticide use, enabling them to also direct their cost savings to hire a district-wide coordinator to oversee pest management in the schools. As a result of this achievement, Monroe County was awarded the Governor's Award for Pollution Prevention. The Monroe County IPM Program has now evolved into the Monroe School IPM Model. By using this model, the emphasis is placed on minimizing the use of broad spectrum chemicals and on maximizing the use of sanitation, biological controls and selective methods of application.[61]

FY 2009 Activities and Performance Plan:

EPA's statutory and regulatory functions for pesticides include registration, reregistration, registration review, implementation, risk reduction, rulemaking and program management. During 2009, EPA will continue to review and register new pesticides, new uses for existing pesticides, and other registration requests in accordance with FIFRA and the Federal Food, Drug and Cosmetic Act (FFDCA) standards as well as Pesticide Registration Improvement Renewal Act (PRIA 2) timeframes. Many of these actions will be for reduced-risk pesticides for which, once registered and utilized by pesticide users, will increase benefits to society. Working together with the affected user communities through programs such as the Pesticide Environmental Stewardship Program and the Strategic Agricultural Initiative, the Agency will find ways to accelerate the adoption of these lower-risk products.

Similarly, the Agency will continue its worksharing efforts with its international partners. Through these collaborative activities and resulting international registrations, international trade barriers will be reduced, enabling domestic users to more readily adopt these newer pesticides into their crop protection programs and reduce the costs of registration through work sharing.

The Section 18 program has helped growers when they faced emergency situations that require the use of pesticides that are not registered for their crops. The economic benefits of the Section 18 program to growers are the avoidance of potential losses they could have incurred in the absence of pesticides exempted under FIFRA's emergency exemption provisions. The economic benefits of the Section 18 program to consumers could include savings in consumer expenditures associated with potential decreases in market prices for the affected crops.

EPA will continue to conduct pre-market evaluations of efficacy claims made for public health pesticides. In addition to reviewing the health and environmental safety from exposure to these products, because these products also make public health claims, it is critical that the Agency determine that, prior to registration, the products will work for their intended purposes. For some of these products, most notably hospital disinfectants through the Antimicrobial Testing Program, the Agency will conduct post-market surveillance to monitor the efficacy of these products.

[61] http://www.epa.gov/pesticides/ipm/

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.			1.5 B	1.5 B	Loss avoided

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/re-registered and available for termite treatment.			900 M	900 M	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Reduced cost per acres using reduced risk management practices compared to the grant and/or contract funds on environmental stewardship.			2 ($2.57)	4 ($2.52)	Reduced (Dollar/acre)

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$850.0 \ +3.3 FTE) This change redistributes regional resources from the Protect the Environment Program and Human Health Program to the Realize the Value Program to better align with the new Pesticides budget structure.

- (+$764.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$703.0) This decrease is a realignment of resources and is not expected to delay emergency exemptions though it may affect activities associated with Registration, Registration Review, RED Implementation actions or Strategic Agriculture Initiative

grants. However, these activities can be successfully supported through increased user fees. This total is a net decrease, including the restoration of the 1.56% rescission.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; ESA; and FQPA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$1,202.9***	***$1,780.0***	***$1,752.0***	***$1,675.0***	***($77.0)***
Total Budget Authority / Obligations	$1,202.9	$1,780.0	$1,752.0	$1,675.0	($77.0)
Total Workyears	6.3	6.3	6.3	6.3	0.0

Program Project Description:

The Agency will continue providing scientific and policy expertise, coordinating EPA interagency and international efforts as well as facilitating the sharing of information related to core science policy issues concerning pesticides and toxic chemicals. Biotechnology is illustrative of the work encompassed by this program. Many offices within EPA regularly deal with biotechnology issues, and the coordination among affected offices allows for coherent and consistent scientific policy from a broad Agency perspective. Independent science review is provided by the Scientific Advisory Panel (SAP), a scientific peer-review mechanism.

Internationally, EPA will continue participating in a variety of activities related to biotechnology and is fully committed to and engaged in international dialogues. The Biotechnology Team will continue to assist in formulating EPA and United States positions on biotechnology issues, including representation on United States delegations to international meetings when needed. Such international activity is coordinated with the Department of State.

FY 2009 Activities and Performance Plan:

The SAP, operating under the rules and regulations of the Federal Advisory Committee Act, will continue to serve as the primary external independent scientific peer review mechanism for EPA's pesticide programs and pesticide-related issues. Scientific peer review is a critical component of EPA's use of the best available science.

EPA estimates that the SAP will be asked to complete approximately 14 reviews in FY 2009. The specific topics to be placed on the FIFRA SAP agenda are typically confirmed a few months in advance of each session and usually include difficult, new or controversial scientific issues identified in the course of EPA's pesticide program activities. In FY 2009, topics may include issues related to biotechnology, chemical-specific risk assessments, and endocrine disruptors, among others.

EPA will continue to play a lead role in evaluating the scientific and technical issues associated with plant-incorporated protectants based on plant viral coat proteins. EPA will also, in

conjunction with an interagency workgroup, continue to maintain and further develop the U.S. Regulatory Agencies Unified Biotechnology website. The site focuses on the laws and regulations governing agricultural products of modern biotechnology and includes a searchable database of genetically engineered crop plants that have completed review for use in the United States.[62]

In addition, a number of international activities will continue to be supported by EPA. Examples include representation on the Organization for Economic Cooperation and Development's Working Group on the Harmonization of Regulatory Oversight in Biotechnology and the Task Force on the Safety of Food and Feed.

Performance Targets:

Currently there are no performance measures specific to this program project. Work under this program supports the *Chemicals and Pesticide Risks* objective, specifically, work done in EPA's Pesticide and Pollution Prevention and Toxics programs. Supported programs include the Registration of New Pesticides and Review/Reregistration of Existing Pesticides. Science Policy and Biotechnology activities such as the SAP assist in meeting targets for measures under those program projects including *Endocrine Disruptors*, *Register Safer Chemicals and Biopesticides*, and *Tolerance Reassessments*.

The work in the Science Policy program also supports efforts in the Toxic Substances: Chemical Risk Review and Reduction program. Science coordination efforts under Science Policy and Biotechnology assist in meeting targets for the *Number of chemicals or organisms introduced into commerce that pose unreasonable risks to workers, consumers, or the environment* through Scientific Advisory Panel meetings and letter reviews.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$32.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$28.0) This change reflects restoration of the 1.56% rescission to all program projects.
- (-$137.0) Reduction attributable to administrative efficiencies. SAP meetings will be reduced by one.

Statutory Authority:

FIFRA; FFDCA; FQPA; TSCA.

[62] http://usbiotechreg.nbii.gov/

Program Area: Resource Conservation and Recovery Act (RCRA)

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$65,599.8***	***$69,158.0***	***$66,297.0***	***$67,111.0***	***$814.0***
Total Budget Authority / Obligations	$65,599.8	$69,158.0	$66,297.0	$67,111.0	$814.0
Total Workyears	432.8	416.9	416.9	397.0	-19.9

Program Project Description:

The Waste Management program's primary focus is to provide national policy directed by the Resource Conservation and Recovery Act (RCRA) to reduce the amount of waste generated and to improve the recovery and conservation of materials by focusing on a hierarchy of waste management options that advocate reduction, reuse, and recycling over treatment and disposal. This program also strives to prevent releases to the environment from both non-hazardous and hazardous waste management facilities, reduce emissions from hazardous waste combustion, and manage waste in more environmentally beneficial and cost-effective ways.

The Waste Management program continues to evolve to address the challenges of the 21st century, including new waste streams from new industrial processes and assessing technological advances and innovative methods of conducting business in the waste management arena. There is an increased focus on reuse and recycling, particularly the safe beneficial use of industrial byproducts as a preference to disposal. Moreover, the program is engaged in regulatory and other reform efforts to improve the efficiency of the program (e.g., e-manifest project) and to provide incentives for increased recycling. EPA actively participates in waste management and resource conservation efforts internationally.

Through the Resource Conservation Challenge (RCC), the program works with industry, states, and environmental groups to explore new ways to reduce materials and energy use by promoting product and process redesign and increased materials and energy recovery from materials otherwise requiring disposal. However, not all materials can be reduced, reused, or recycled and, therefore, some wastes must be safely treated and disposed. Thus, EPA and the states maintain the critical health and environmental protections provided by the base "cradle to grave" waste management system envisioned by RCRA.[63]

[63] Refer to (http://www.epa.gov/rcc/).

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to assist states in getting permits, permit renewals, or other approved controls in place at facilities that treat, store, or dispose of hazardous waste. EPA will focus efforts on helping states overcome barriers, particularly with regard to the types of facilities that are difficult to permit or where emissions are difficult to control, such as boilers and industrial furnaces (BIFs) and large, complex Federal facilities. As established in EPA's 2006-2011 Strategic Plan, EPA will prevent releases at 500 RCRA hazardous waste management facilities by implementing initial approved controls or updated controls by 2011. During FY 2009, EPA will meet its annual target of implementing initial approved controls or updated controls at 100 RCRA hazardous waste management facilities. The Waste Management program also will continue efforts to improve the implementation of the RCRA financial assurance program in order to ensure that owners and operators of hazardous waste facilities provide proof of their ability to pay for the clean up, closure, and post-closure care of their facilities.

The Agency will work to improve and modernize the hazardous waste tracking system by developing an "e-manifest" system during FY 2009. This system will allow electronic processing of hazardous waste transactions that will greatly enhance tracking capabilities while significantly reducing administrative burden and costs for governments and the regulated community. The e-manifest will build on the new standardized manifest form that took effect in September 2006, and the regulatory development and system user requirements work accomplished during FY 2007 and 2008. This system will ensure the continued safe management of hazardous waste.

Gasification of oil-bearing hazardous secondary materials from petroleum refining as feedstocks for clean fuels and basic chemicals will allow the capture of a significant amount of energy from waste materials that previously were treated and disposed of, thus turning a waste problem into an energy solution. In FY 2009, EPA plans to follow up on the issuance of the final rule to allow gasification, thereby expanding the reuse of petroleum residuals currently managed as waste. In addition, the Agency will continue to work on developing a rule that would conditionally exempt solvent-contaminated industrial wipes from full hazardous waste regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The Agency is committed to completing this rulemaking and is working to finalize the rule as quickly as possible, while ensuring that it is based on sound science and protective of human health and the environment.

The Agency will continue its regulatory reform efforts in FY 2009 to encourage safe recycling of hazardous secondary materials by providing streamlined regulatory requirements and minimizing regulatory burden where appropriate. Increased recycling of hazardous secondary materials is an important part of moving toward sustainable industrial production by returning recoverable commodities to the economy, minimizing wasteful disposal of these valuable materials, and minimizing additional raw materials production. Completion of revisions to the definition of solid waste, which will promote recycling of a wide range of spent solvents, spent acids and bases, and metal-containing waste is a major project in FY 2008. In FY 2009, EPA will work with states and other stakeholders to begin implementation of these revisions.

Another important area of reform in FY 2009 will be the continuation of efforts to make the hazardous waste program more cost-effective and easy-to-use for the more than 100 thousand

generators of hazardous waste. This effort encompasses many projects, for example, the completion of a final regulation specifying alternative requirements for college and university laboratories that generate hazardous waste as well as an effort to streamline the management of pharmaceutical wastes. In addition, EPA will prepare guidance materials on issues raised by the regulated community and, if determined necessary, propose regulatory changes to improve the program.

The Agency also will work to reduce risks from industrial non-hazardous materials. EPA will continue to work with interested parties to apply the voluntary "Guide for Industrial Waste Management" which provides facility managers, state and Tribal regulators and interested public with recommendations and tools to better address the management of land-disposed non-hazardous industrial waste. EPA will continue to track state implementation of the Research, Development, and Demonstration rule to determine whether additional rulemaking is warranted. The Agency will continue working on implementing its regulatory determination for coal ash and cement kiln dust, as well as work on partnership efforts for these two materials, and will continue to participate in oil and gas state reviews. In addition, EPA will continue to assist states in Bevill determinations and other mining related activities.

During FY 2009, the Waste Management program will continue working with the Department of Agriculture, the Food and Drug Administration, and the Department of Homeland Security to prepare for possible terrorist or natural disaster events and threats to the food chain. EPA will work to expand information on technologies and tools for use in decontamination/disposal operations related to terrorist events and natural disasters or other disease outbreaks.

In FY 2009, the Agency will continue to issue Polychlorinated Biphenyl (PCB) disposal and cleanup approvals. EPA will work with the U.S. Navy to address the reefing of ships and will work with the Maritime Administration in order to safely dismantle its fleet of obsolete ships which contain equipment using PCBs and other materials. In addition, the Agency will work with the Department of Defense to oversee the disposal of PCBs in nerve agent rockets. In FY 2008, EPA is transferring the PCB cleanup and disposal activities from the Chemical Risk Management program to the RCRA Waste Management program. This transfer promotes efficiency and consolidated PCB activities into the RCRA program.

Providing grant funds, training, and technical assistance to tribes and Tribal organizations for the purpose of solving solid waste problems and reducing the risk of exposure to improperly disposed hazardous and solid waste also is a priority in FY 2009. Many of the 561 Federally-recognized tribes have no plan for managing solid and hazardous waste, resulting in large amounts of waste being open-burned or placed in open dumps. The 2011 GPRA goals are to increase the number of Tribal governments with an integrated waste management plan by 25 percent and to close, clean, or upgrade 200 open dumps. During FY 2009, EPA will increase the number of tribes covered by an integrated waste management plan by 16. In addition, EPA will increase the number of closed, cleaned up, or upgraded open dumps in Indian country or on other Tribal lands by 27. For FY 2009, the focus of the program will be on developing training and technical assistance tools for Tribal governments to develop sustainable waste management programs to meet these goals.

This program was included in the PART review of the RCRA Base, Permits and Grants Program for FY 2004 which received an overall rating of "adequate." During the PART, EPA developed an efficiency measure and the baseline (for FY 2005) that was set in July 2006 is 2,143 facilities under control per $674 million in costs, or 3.17 facilities per million dollars. Costs include estimates of the permitting costs of the regulated entities plus appropriated dollars for the program, based on a three year rolling average. The 2008 target is a three percent improvement from baseline, and the 2009 target is a four percent improvement from baseline or one percent per year.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Number of facilities with new or updated controls per million dollars of program cost.	3.36%	2	3.64	3.68	percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of hazardous waste facilities with new or updated controls.				100	facilities

During FY 2009, EPA will coordinate efforts with the states to meet permitting program goals for initial and updated controls to prevent releases. The Agency has determined that the reporting cycles for permitting and renewals will be consolidated at the end of FY 2008. These program objectives continue to contribute toward achieving the goals of EPA's 2006-2011 Strategic Plan.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$131.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs requested by the program.

- (+$945.0) This change reflects restoration of the 1.56% rescission in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support policy development and outreach efforts for the Waste Management program.

- (+$2,000.0) This change reflects a partial restoration of funding to RCRA e-manifest system which was reduced in FY 2008 as directed by Congress. EPA will continue to work with Congress to obtain the authority to collect user fees to offset the costs for the development and operation of this system.

- (-$2,000.0) This change reflects a reduction to funding to expedite rulemaking as directed by Congress in FY 2008. The reduction in FY 2009 will not impede the progress of this work.

- (-19.9 FTE) This reduction reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities. The program has matured, resulting in a reduced need for Federal FTE resources due to the delegated nature of the program and improvements in program management.

Statutory Authority:

SWDA, Section 8001, as amended; RCRA of 1976 as amended; Public Law 94-580, 42 U.S.C. 6901 et seq.; TSCA, Section 6, Public Law 94-496, 15 U.S.C. 2605; Department of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations Act, Public Law 105-276, 112 Stat. 2461, 2499 (1988).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$39,373.3***	***$39,573.0***	***$39,076.0***	***$39,018.0***	***($58.0)***
Total Budget Authority / Obligations	$39,373.3	$39,573.0	$39,076.0	$39,018.0	($58.0)
Total Workyears	236.8	252.7	252.7	246.9	-5.8

Program Project Description:

The Resource Conservation and Recovery Act (RCRA) authorizes EPA to implement a hazardous waste management program for the purpose of controlling the generation, transportation, treatment, storage and disposal of hazardous wastes. An important element of this program is the requirement that facilities managing hazardous waste clean up past releases. This program, which is largely implemented by authorized states, is known as the Corrective Action program. Although the states[64] are the primary implementers of the Corrective Action program, EPA Regional staff have the lead at a significant number of facilities undergoing corrective actions. Key program implementation activities include: development of technical and program implementation regulations, policies and guidance, and conducting corrective action activities including assessments, investigations, stabilization measures, remedy selection, remedy construction/implementation, and technical support and oversight for state-led activities.[65]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to work toward the 2020 goal of constructing final remedies at 95 percent of all facilities. Implicit in that goal, first outlined in the EPA FY 2006 – FY 2011 Strategic Plan, EPA also will control human exposures to toxins at a minimum of 95 percent of facilities and control the migration of contaminated groundwater at a minimum of 95 percent of facilities by 2020. These long-term goals have been set against the 2020 Corrective Action Universe, a new baseline which EPA finalized in May 2007, which includes 3,746 facilities believed to require corrective action. Beginning in FY 2009, the annual targets for RCRA Corrective Action have also been revised to align with this newly assessed baseline.

The Agency will work in partnership with the states to coordinate cleanup program goals and direction. Ensuring sustainable future uses for RCRA corrective action facilities is considered in remedy selections and in the construction of those remedies. This is consistent with EPA's

[64] This includes both those states authorized for corrective action and those not authorized for corrective action through work sharing agreements with their EPA Regional Offices.
[65] For more information please refer to http://www.epa.gov/correctiveaction/.

emphasis on land revitalization. The Agency will continue to present training that focuses on selecting and completing final remedies to Regional and state RCRA Corrective Action staff.

In FY 2009, the Agency will be working with its state partners to continue developing and implementing program improvements in order to meet the ambitious 2020 goal. EPA and the states will continue to develop and implement approaches for selecting and constructing final remedies at operating facilities that are protective as long as the facility remains active and will ensure that protective controls are in place if the use changes in the future.

EPA will ensure that polychlorinated biphenyls (PCB) waste and PCB remediation sites are cleaned up correctly. Specific activities include advising the regulated community on PCB remediation and reviewing and acting on disposal applications for PCB remediation waste.

The RCRA Corrective Action program was initially assessed under the PART review in 2003 and received an overall rating of "adequate." The assessment found that the program puts decision-making authority close to the actual clean up activity while still ensuring oversight and consistency in protecting human health and the environment. As part of the program's improvement plan, EPA developed an efficiency measure for the program, which is the number of final remedy components constructed at RCRA corrective action facilities per Federal, state and private sector costs. The intent of the measure is to show, over time, the percent increase of final remedy components constructed per the costs related to the cleanup and oversight of cleanup at RCRA facilities.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent increase of final remedy components constructed at RCRA corrective action facilities per federal, state, and private sector dollars per year.	6.20	3	3	3	percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of RCRA facilities with human exposures under control.				60	facilities

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of RCRA facilities with				60	facilities

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	migration of contaminated groundwater under control.					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of RCRA facilities with final remedies constructed.				100	facilities

For FY 2009 annual performance targets, EPA (and states) will complete construction at 100 of the highest priority RCRA facilities from the 2008 baseline. EPA (and states) will continue to track the human exposures and groundwater control environmental indicators. In FY 2009, EPA (and states) will meet the goal of controlling human exposures to toxins at 60 of the 2008 baseline RCRA facilities. EPA (and states) will also meet the FY 2009 goal of controlling the migration of contaminated groundwater at 60 of the 2008 baseline facilities.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$609.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$1,102.0) This change reflects reduced need for resources that reflects the program's increased efficiencies and success in addressing stabilization at 95 percent of the highest priority RCRA facilities. This reduction will not impede the program's strategy for proceeding with its remaining long range corrective action work.

- (+$435.0) This change reflects the net effects of the restoration of the 1.56% rescission combined with technical changes such as realignment of IT, travel or other support costs across the program. These funds will support the Corrective Action program.

- (-5.8 FTE) This reduction reflects EPA's workforce management strategy that will help align available resources and skills to Agency priorities. The Corrective Action program is able to reduce FTE resources due to increased efficiencies resulting from the delegated nature of the program and improvements in program management. This reduction will not impede Agency efforts to maximize effectiveness and reach its goals.

Statutory Authority:

SWDA, Section 8001 as amended; RCRA of 1976 as amended; Public Law 94-580, 42 U.S.C. 6901 et seq.; TSCA, Section 6, Public Law 94-469, 15 U.S.C. 2605; Department of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations Act, Public Law 105-276, 112 Stat. 2461, 2499 (1988).

RCRA: Waste Minimization & Recycling
Program Area: Resource Conservation and Recovery Act (RCRA)
Goal: Land Preservation and Restoration
Objective(s): Preserve Land

Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$12,506.2***	***$13,666.0***	***$13,495.0***	***$14,397.0***	***$902.0***
Total Budget Authority / Obligations	$12,506.2	$13,666.0	$13,495.0	$14,397.0	$902.0
Total Workyears	67.1	82.2	82.2	82.2	0.0

Program Project Description:

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 reducing, reusing, and recycling. The Waste Minimization and Recycling program implemented through the Resource Conservation Challenge (RCC) emphasizes national policy development and leadership to reduce the generation and environmental impacts of materials from businesses, industries, and communities by fostering adoption of more efficient, sustainable, and protective policies, practices, materials, and technologies.

The program focuses its efforts on reduction, reuse, and recycling by building on partnerships with other Federal agencies; state, Tribal, and local governments; business and industry; and non-governmental organizations. These partnerships provide performance metrics, information sharing, recognition, and assistance to improve practices in both public and private sectors.[66]

The program also implements waste minimization activities that diminish chemicals of most concern to human health and the environment. This approach involves relating chemicals to waste streams and seeks to reduce not only the volume of wastes, but also the toxicity of wastes. A goal of reducing chemicals in wastes also will lead to safer chemical substitutions and processes upstream, and eliminate occupational exposures to the chemicals of concern.

[66] Refer to http://www.epa.gov/rcc.

FY 2009 Activities and Performance Plan:

Municipal Solid Waste (MSW)

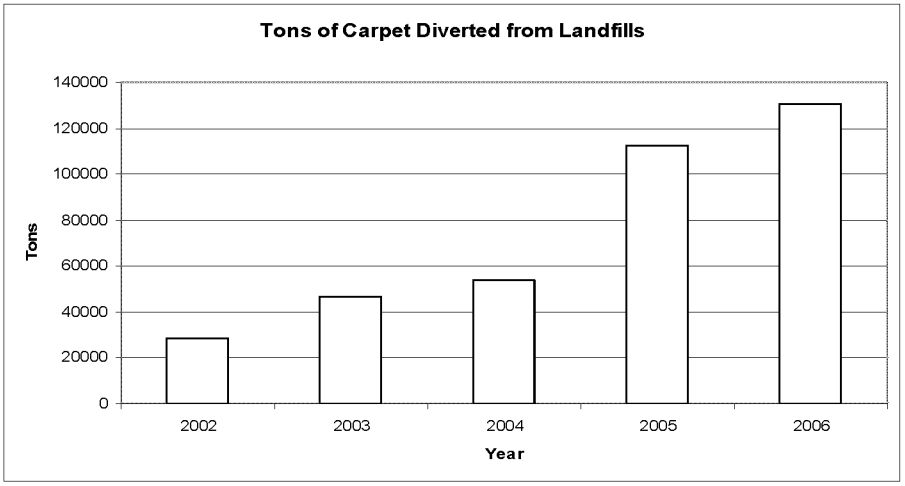
Under the RCC, EPA will increase its efforts to motivate and provide leadership to industry, Federal, state and local governments, public interest groups, and citizens to reduce, reuse, and recycle municipal wastes. In the FY 2006 - FY 2011 Strategic Plan, EPA signaled the transition toward new effective strategic targets that benchmark and quantify our environmental progress toward sustainable resource conservation

In FY 2009, EPA will lead enhanced efforts focused on three large-volume material categories from municipal/commercial sources, with the greatest opportunity for recycling: (1) paper; (2) organics; and (3) packaging and containers. These three materials represent 60 to 70 percent of the current municipal solid waste stream and are key areas on which the nation must focus resources to reach the 40 percent recycling challenge. The Agency also is emphasizing reductions of greenhouse gases (GHG) and increased energy savings. As a result of this increased emphasis, EPA will review its current priority materials and determine the greatest opportunities for decreased GHG emissions and increased energy savings.

EPA's WasteWise program is now in its 14th year and has more than 1,900 partners and endorsers. As part of a WasteWise campaign launched in 2008, EPA will provide enhanced tools to help communities reduce waste and increase recycling and will promote alliances between businesses and communities that can advance waste reduction and recycling. In FY 2009, EPA will enhance its efforts to promote Pay-as-You-Throw to local communities to increase the efficiency of their materials management. The local government toolkit will be included in the Pay-as-You-Throw promotion efforts, which will include presentations, training, increased outreach efforts, technical assistance, and support.

Through the GreenScapes program, EPA will provide cost-efficient and environmentally-friendly solutions for landscape design, construction, and maintenance at large and small developments such as golf courses, parks and industrial parks. The goal is to preserve natural resources and prevent waste and pollution by encouraging organizations and individuals to make environmentally sound decisions regarding their landscape practices and purchases. In FY 2009, GreenScapes plans to reach out to homeowners and target wholesalers and large retailers as well as Non-governmental Organizations (NGOs).

Beginning in 2002, EPA collaborated with the carpet and fiber manufacturers and signed the National Carpet Recycling Agreement (http://www.carpetrecovery.org/mou.php) along with the Carpet and Rug Institute, state governments, and NGOs. This agreement established a 10-year schedule to increase the amount of recycling and reuse of post-consumer carpet and reduce the amount of waste carpet going to landfills. To date, EPA's work with its partners has been very successful in reducing the volume of carpet which is landfilled.



Source: 2006 CARE Annual Report, http://www.carpetrecovery.org/reading.php.

Industrial Non-Hazardous Waste

Under the RCC, EPA will continue to pursue collaborative efforts to increase the safe reuse and recycling of industrial byproducts, with resultant benefits of decreased disposal, reduced greenhouse gas emissions and energy savings. By working with manufacturers, utilities, government agencies, and transportation and building construction companies, the RCC Industrial Materials Recycling effort is focusing on three large industrial non-hazardous waste streams: (1) coal combustion products; (2) construction and demolition debris; and (3) foundry sand.

In FY 2009, the program will continue to expand its voluntary Coal Combustion Partnership Program (C2P2) to include industrial material recycling. EPA will use C2P2 as a model to foster the safe, beneficial use of other industrial non-hazardous waste streams, such as foundry sands and construction and demolition debris. Recognizing that Clean Air Act regulations will result in increased generation of flue gas desulfurization (FGD) materials, which can be used as a fertilizer in agriculture, C2P2 will increase efforts to enhance markets for these materials.

EPA also will continue working with Federal, state, and private sector outreach programs to promote environmentally safe and sound reuse and recycling of construction and demolition (C&D) debris, which is a larger waste stream than MSW. During EPA's peer review of the baseline data used to establish the C&D material long-term 2011 goal and annual targets, stakeholders provided comments and clarification on the data sources used to estimate the amount of C&D materials being recycled. After addressing these comments and including these data, EPA recalculated the recycling rate and found that 65 percent of C&D materials were already being recycled. Currently, EPA is working with stakeholders to develop a new long-term goal and annual targets founded on improved data. In establishing the new goal, the Agency will examine the accuracy, frequency, and availability of data sources. In FY 2009, EPA will implement activities to make progress in achieving this goal: for example, partnering with industry to develop and disseminate information materials, conduct workshops to raise awareness, and obtain commitments from construction project developers and builders.

Priority Chemicals Reduction

In FY 2009, through the National Partnership for Environmental Priorities (NPEP), the Agency will continue to reduce priority chemicals which are persistent, bioaccumulative, and highly toxic. The NPEP program has established a goal to reduce program priority chemicals by 4 million pounds by FY 2011, with an annual FY 2009 target of 1 million pounds reduced. As of August 2007, the NPEP program has obtained industry commitments for over 6.5 million pounds of priority chemical reductions through 2007-2011, including 2.3 million already achieved. These reductions will be achieved primarily through source reduction made possible by safer chemical substitutes. Currently, EPA continues to build on the successes achieved by nearly 140 existing partners and promote the growth of the NPEP through expanded outreach activities, workshops, and enhanced Regional involvement. In addition to enrolling new partners, EPA will seek new commitments from existing partners, with an emphasis on enrolling corporations on a national basis.

EPA initiated a *Mercury Roundup* in FY 2006 to promote the voluntary early retirement of devices containing mercury. A formal challenge and request was issued to major industrial facilities, urging mercury elimination. Partners commit to the following activities:

- Inventory mercury sources in their facilities and evaluate non-mercury alternatives.
- Establish purchasing policies and educate staff.
- Collect existing mercury for recycling.

By August 2007, EPA identified approximately 16 mercury challenge partners. The Agency has achieved a reduction of 350 pounds of mercury from those partners and has commitments to reduce more than 2.5 thousand pounds in addition to that total. In FY 2009, EPA expects to seek to enroll new partners and expand commitments from existing partners.

Schools Chemical Cleanout Campaign and Prevention Program (SC3)

Since its implementation SC3 has funded 20 pilots that have demonstrated innovative practices and has worked toward building a national network of industry, teachers' associations, and government partners to raise national awareness and make chemical clean-out and prevention techniques widely available to schools. In FY 2009, EPA will continue its work toward ensuring that K-12 schools in the United States are free from chemical hazards associated with poor chemical management in schools by providing targeted grants to promote innovation in chemical management in schools, and by expanding the network of industry partners who have volunteered to assist schools in safely removing chemicals and helping schools develop effective measures to prevent chemical management problems before they can occur.

E-Waste

In FY 2009, EPA will continue to address the nation's growing electronics waste stream through partnerships with private and public entities including Plug-In To eCycling, the Federal Electronics Challenge (FEC), and Electronic Product Environmental Assessment Tool (EPEAT).

Through Plug-In, EPA has established partnerships with 23 major electronic businesses and more than 95 million pounds of consumer electronics have been collected and reused or recycled safely. Building on current Plug-In to eCycling activities EPA will investigate ways to motivate consumers to optimize use of the existing recycling infrastructure while recycling their end-of-life electronic equipment. The Plug-In program also will explore new ways to promote responsible electronic recycling across the business community.

The FEC was established to advance the Federal government's goals and practices for electronics stewardship and has grown beyond the pilot stage. As of 2006, FEC had officially enrolled 133 Challenge partners -- agencies or facilities -- representing 16 Federal departments/agencies which represent more than 80 percent of Federal agency purchasing power for IT equipment. By the end of FY 2008, the goal is to have at least 700 thousand Federal employees covered under the FEC. A key component of the FEC program is improving the manner in which Federal agencies manage their used electronic equipment.

EPEAT was developed in response to growing demand by institutional purchasers for an easy-to-use evaluation tool enabling them to compare electronic products based on environmental performance, in addition to cost and performance considerations. As of June 2007, approximately 532 products manufactured by 19 manufacturers were EPEAT-registered and listed on the EPEAT Product Registry Web page. The end-of-life treatment of electronic equipment is a key component of the EPEAT program. In FY 2009, EPA plans to identify key elements in designing electronic components to allow improved end-of-life management (i.e., reuse/recycling). This work will be included in new EPEAT standards for electronic equipment. EPA also expects to refine and build tools which identify the environmental benefits of reuse and recycling of electronic equipment.

EPA's Recycling, Waste Minimization and Waste Management Program underwent a PART assessment in FY 2004 and received an overall rating of "adequate".

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of coal combustion ash that is used instead of disposed.	Data Unavail-able	1.8	1.8	1.8	percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands.	107	30	30	27	open dumps

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of tribes covered by an integrated solid waste management plan.	28	27	26	16	tribes

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Daily per capita generation of municipal solid waste.	Data Unavail-able	4.5	4.5	4.5	lbs. MSW

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of pounds (in millions) of priority chemicals reduced, as measured by National Partnership for Environmental Priorities members.	1.30	0.5	1	1	pounds

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Number of pounds of priority chemicals reduced from the environment per federal government costs.	Data Unavail-able	1.5	0.6	0.6	percent

In the FY 2006 – FY 2011 Strategic Plan, EPA established a new measure to increase coal combustion ash use to 50 percent by 2011, from 32 percent in 2001, with an annual target of increasing the percentage of coal ash used by 1.8 percent during FY 2009. The most recent data from the 2005 annual survey show coal combustion ash beneficial use remains at 40 percent. The Agency will implement its new relationship with USDA as a major sponsor of C2P2 in order to provide outreach and assistance to increase the use of FGD material in agricultural applications.

EPA continues to work on documenting the significant environmental benefits (i.e., reductions in GHG and energy saving) from reducing, reusing, and recycling materials that were once disposed as wastes. The effort will include a focus at the regional and local level to prevent GHGs and save energy through materials management to increase environmental benefits. At current resource levels, the RCC program and its partners are showing tremendous benefits; for

example, in the area of municipal solid waste, we have seen: 12 MMTCE of GHG reductions (equal to preventing the pollution from 9 million cars) and 349 trillion BTUs saved (equal to 2.8 billion gallons of gasoline).

In FY 2009, EPA will focus on increasing greenhouse emissions reductions and energy savings, through efficient materials management from small businesses at the local level. In 2005, members of three RCC programs (WasteWise, C2P2, and Carpets) reported GHG reductions of 11 million metric tons of carbon equivalent (MMTCE) (equal to preventing the pollution from 8.4 million cars) and savings of almost 337 trillion British thermal units (BTU) of energy (equal to 8.5 percent of annual US residential energy use).

EPA has developed an efficiency measure that will show, over time, the total reduction of priority chemicals contained in industrial waste streams per Federal and private sector cost. In FY 2006, EPA identified and confirmed the quality of data sources produced in the private sector to use with this efficiency measure in FY 2007 and FY 2008. The FY 2006 baseline for the efficiency measure, "number of pounds of priority list chemicals removed from or reduced in waste streams per cost to perform such actions (costs are Federal RCRA program extramural dollars and FTE)," is 1.1 million lbs / $2,689 million or 40.9 lbs reduced per $100 spent. Targets are set to improve 1.5 percent each year from the baseline.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$549.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$353.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SWDA, Section 8001 as amended; RCRA of 1976, as amended; Public Law 94-580, 42 U.S.C. 6901 et seq. Veterans Administration (VA) and Housing and Urban Development (HUD) and Independent Agencies Appropriations Act; Public Law 105-276; 112 Stat. 2461, 2499 (1988); Pollution Prevention Act of 1990 (42 U.S.C. 13101).

Program Area: Toxics Risk Review and Prevention

Endocrine Disruptors
Program Area: Toxics Risk Review and Prevention
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$9,855.8***	***$5,890.0***	***$8,663.0***	***$5,847.0***	***($2,816.0)***
Total Budget Authority / Obligations	$9,855.8	$5,890.0	$8,663.0	$5,847.0	($2,816.0)
Total Workyears	16.3	11.0	11.0	11.0	0.0

Program Project Description:

The Endocrine Disruptor Screening Program (EDSP) establishes policies and procedures for implementing the endocrine effects screening authorities of the Food Quality Protection Act (FQPA) and Safe Drinking Water Act (SDWA). The program develops and validates approximately 19 candidate scientific test methods from which a battery of tests will be selected and used for the routine, ongoing evaluation of pesticides and other chemicals to determine their potential for adverse health or environmental effects by interfering with normal endocrine system function. For more information, please visit http://www.epa.gov/scipoly/oscpendo/.

FY 2009 Activities and Performance Plan:

In FY 2009, the EDSP will maintain the schedule of completing validation assays that will be used to either screen chemicals to identify those that can interact with the endocrine system (Tier I) or to confirm these findings and provide information that can be used in risk assessment (Tier II). EPA will continue collaboration with our international partners through the Organization for Economic Cooperation and Development (OECD), conserving EPA resources and promoting adoption of internationally harmonized test methods for identifying endocrine disrupting chemicals. EPA is either the lead country or a participant in the following ongoing OECD projects involving Tier 1 screening assays that are candidates for validation by EPA's EDSP:

- The H295R cell-based assay used to detect chemicals that interfere with the steroid hormone synthesis pathway. EPA is providing two laboratories for this effort out of a total of seven laboratories.

- The recombinant estrogen receptor assay. EPA is providing three out of a total of six laboratories.

- The interlaboratory trials for the frog screening assay were conducted in cooperation with laboratories across Europe. This has resulted in resource savings for the U.S.

- EPA also is working with OECD on the design of Tier 2 assays including a more efficient and effective assay to replace the routine use of the mammalian two-generation assay, and multigeneration tests in fish, birds, frogs, and invertebrates.

The Endocrine Disruptor Program underwent PART evaluation in calendar year 2004 and received a rating of "Adequate." The assessment found that the program is free of major design flaws, has a clear purpose, and is reasonably well-managed.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative number of assays that have been validated.	3/20	8/20	13/20	14/19	Assays

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Contract cost reduction per study for assay validation efforts in the Endocrine Disruptors Screening Program	63	1	1	1	Percent

This program's output performance measure represents the progress toward completing the validation of endocrine test methods that will be used to screen chemicals for their potential to affect the endocrine system, as required by FQPA.

We anticipate that the FY 2007 actual will be below the target because the program experienced scientific and technical problems that could not have been predicted on several assays (e.g., estrogen receptor binding, androgen receptor binding and fish screen), as well as unanticipated delays in international decisions on assays being validated in coordination with the Organization for Economic Cooperation and Development (e.g., estrogen and androgen binding assays). Several of the assays that were expected to be completed by the end of this fiscal year, however, are either in peer review (the final stage of the validation process), or are scheduled to begin peer review early in FY 2008.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$56.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$38.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (-$2,910.0) This decrease returns the program to historic levels for the Endocrine Disruptor program. The change will not impact long-term scheduled work for completing validation of screening and testing assays. The screening and testing of assays was delayed due to inherent scientific uncertainties associated with assay development and validation processes.

Statutory Authority:

RCRA; CERCLA; SARA; OPA; SDWA; CAA; CWA; TSCA; FIFRA; FQPA; EPCRA; ODA; PPA.

Toxic Substances: Chemical Risk Review and Reduction
Program Area: Toxics Risk Review and Prevention
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$44,701.7***	***$45,046.0***	***$45,672.0***	***$46,477.0***	***$805.0***
Total Budget Authority / Obligations	$44,701.7	$45,046.0	$45,672.0	$46,477.0	$805.0
Total Workyears	237.2	241.1	241.1	241.1	0.0

Program Project Description:

This program spans the full range of EPA activities associated with screening, assessing and reducing risks of new and existing chemicals. Key program efforts include the following:

- Screening of high production volume chemicals under the High Production Volume (HPV) Challenge program and the Organization for Economic Cooperation and Development (OECD) Screening Information Data Set (SIDS) Program, critical elements of new U.S. commitments under the Security and Prosperity Partnership for North America to assess and initiate needed action on the over 9 thousand existing chemicals produced in quantities above 25 thousand pounds per year in the U.S.;
- The Voluntary Children's Chemical Evaluation Program (VCCEP);
- Reviewing and reducing risks of other industrial/commercial chemicals of concern under the Toxic Substances Control Act (TSCA), including the New Chemicals Program (which focuses on reviewing and, as necessary, managing the health and environmental risks of chemicals being introduced into the United States marketplace), assessment of nanoscale materials associated with new and existing chemicals, the 2010/15 Perfluorooctanoic Acid (PFOA) Stewardship Program (launched in January 2006), and the development of Acute Exposure Guideline Levels (AEGLs).

These programs reduce and prevent unreasonable risks to human health and the environment from new and existing chemicals and increase the efficiency of risk review and reduction efforts.

FY 2009 Activities and Performance Plan:

<u>High Production Volume (HPV) Challenge Program and the Security and Prosperity Partnership (SPP)</u>

In FY 2009, EPA will continue work initiated in FY 2007 to evaluate the screening level chemical hazard data obtained through the landmark U.S. HPV Challenge Program and companion Organization for Economic Cooperation and Development (OECD) Screening Information Data Set (SIDS) Program, combined with the expanded exposure information

reported under the 2006 TSCA Inventory Update Reporting (IUR), leading to development of risk-based prioritization decisions for HPV chemicals (defined as one million pounds or more per year produced or imported). Similar work was initiated in FY 2008 and will continue in 2009 to develop prioritization documents on Moderate Production Volume (MPV) chemicals (25,000 to one million pounds per year). This work is included in the August 2007 SPP agreement between the U.S., Canada and Mexico, under which the U.S. committed to assess and initiate action on over 9,000 HPV and MPV chemicals by 2012. The documents identify needed actions on chemicals presenting potential risks.

Actions initiated by EPA could involve voluntary information collection, chemical testing or risk reduction efforts and regulatory actions such as Significant New Use Rules (SNURs), Section 4 Test Rules, or other rules to prevent unreasonable risks. EPA will more than double its production of HPV risk-based decisions in FY 2009. Industry will contribute to the 3,000 HPV chemical components of the SPP commitments through the industry-led Extended High Production Volume Challenge Program (EHPV), which focuses on approximately 500 chemicals that achieved HPV status after the HPV Challenge Program had commenced.

EPA will allocate $10.8 million to this work area in FY 2009. For more information on the HPV Challenge Program and the SPP commitments, please visit http://www.epa.gov/hpv/index.htm.

Voluntary Children's Chemical Evaluation Program (VCCEP)

In FY 2009, EPA expects that all voluntary testing and assessments for the 20 chemicals in the VCCEP Pilot Program will be completed, with most of the assessments having been completed before the end of FY 2008. During FY 2008 and FY 2009, EPA will use the information gathered from an evaluation of the initial pilot of VCCEP and work with stakeholders to adjust and enhance VCCEP's post-pilot operations in FY 2009 and beyond. EPA expects that a significant portion of the operational costs of VCCEP peer consultations will be shifted from EPA to companies sponsoring chemicals in the program beginning in FY 2009.

EPA will devote $544 thousand to this work area in FY 2009. For more information, visit http://www.epa.gov/oppt/vccep/index.htm.

Other Chemicals of Concern Under TSCA

Remaining resources in this program are devoted to reviewing and reducing risks of other chemicals of concern under TSCA, including review of new chemicals before they enter commerce. In FY 2009, EPA will continue its successful record of preventing the entry of chemicals that pose unreasonable risks to human health or the environment into the U.S. market. Each year, the Premanufacture Notice (PMN) Review component of EPA's New Chemicals Program reviews and manages the potential risks from approximately 1,500 new chemicals, 40 products of biotechnology, and new chemical nanoscale materials prior to their entry into the marketplace. To measure performance under this program, EPA adopted in FY 2006 (with a FY 2004 baseline) a long-term measure establishing a "zero tolerance" performance standard for the number of new chemicals or microorganisms introduced into commerce that pose an unreasonable risk to workers, consumers, or the environment. The Agency has achieved the 100

percent goal in all four years that the measure has been tracked (FY 2004 to FY 2007). For more information visit www.epa.gov/opptintr/newchems.

Nanoscale Materials

In FY 2009, EPA will continue to implement its voluntary Nanoscale Materials Stewardship Program for new and existing chemical nanoscale materials that are subject to TSCA requirements. EPA will focus on analyzing the data it has received through the program to understand which nanoscale materials are produced, in what quantities, and what other risk-related data are available. EPA will use this information to understand whether certain nanoscale materials may present risks to human health and the environment and warrant further assessment, testing or other action. In FY 2009, EPA will also prepare for the evaluation step of the program. EPA will issue an interim report that will describe the types of data received and how the data are being used. EPA will then develop a more detailed evaluation in the year 2010 regarding how the stewardship program addressed the objectives identified for the program.

Existing Chemicals Program

The Agency's Existing Chemicals program screens, assesses, and manages the human health and environmental risks of chemicals already in commerce. An important example is its work on perfluorooctanoic acid (PFOA). PFOA is an essential processing aid in the manufacture of fluoropolymers, substances with special properties that have thousands of important manufacturing and industrial applications, and fluorinated telomers, which may be a breakdown product of other related chemicals. EPA will continue to evaluate and implement PFOA risk management actions, as indicated based on the results of ongoing risk assessment and testing under Enforceable Consent Agreements (ECAs) and Memoranda of Understanding (MOUs) with industry. The final report of the ECA regarding incineration testing of telomer composites is due in July 2008, and the fluoropolymer ECA report is due in October of 2009. The 3M Company MOU peer consultations process, which will help evaluate the environmental monitoring information developed under this MOU, is underway and likely to continue into FY 2009. The DuPont Corporation MOU peer consultation process has also begun, but the review itself will occur primarily in FY 2009.

In FY 2009, EPA will continue its own direct telomer biodegradation research testing, as well as the testing of fluoropolymer and fluorotelomer consumer articles to determine whether they contain PFOA and are capable of releasing PFOA as they age in use. Also, the Agency launched a global PFOA Stewardship Program in January 2006 for U.S. fluoropolymer and telomer manufacturers. Eight major manufacturers of these chemicals have agreed to participate. Participating companies have committed to reduce PFOA emissions and product content by 95 percent no later than 2010, and to work toward eliminating PFOA emissions and product content no later than 2015. EPA received the first progress reports from companies participating in the PFOA Stewardship Program in October, 2007. Significant progress towards these goals is expected in FY 2009. The Agency will receive annual updates through 2015. For more information, visit www.epa.gov/oppt/pfoa.

An aspect of the Existing Chemicals program's work that has direct impact on the nation's homeland security is the development of values for Acute Exposure Guideline Levels (AEGLs). Emergency planners and first responders use AEGLs to prepare for and deal with chemical emergencies by determining safe exposure levels. Following September 11, 2001, a series of investments in the Homeland Security: Preparedness, Response, and Recovery chemical program augmented resources to support accelerated development of Proposed AEGL values. Beginning in FY 2009 the program will shift emphasis towards elevating Proposed values to Interim and ultimately Final status via peer review by the National Academies of Science. Accordingly, in FY 2009 the program plans to develop Proposed AEGL values for 18 additional chemicals, compared with 33 in FY 2007 and 23 in FY 2006, but will remain on target to meet its long-term goal of developing Proposed AEGL values for 287 chemicals by 2011. In addition, Final values will be completed for at least six additional chemicals in FY 2009.

EPA will allocate $34.5 million to reviewing and reducing risks of these other chemicals of concern under TSCA in FY 2009. For more information visit www.epa.gov/oppt/aegl.

The Chemical Risk Review and Reduction Program was evaluated through PART in 2007, resulting in a Moderately Effective rating and the third highest points rating of all EPA programs assessed to date. The program is implementing PART Program Improvement Follow-Up Actions to enhance and develop additional outcome measures to add to its already robust portfolio of sound and effective measures, including a biomonitoring measure drawing on data collected by CDC's National Health and Nutrition Examination Survey (NHANES).

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	33	24	24	18	Chemicals

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities.	Data Avail 2008	4	3.5	3.2	Percent RSEI Rel Risk

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent reduction from baseline year in average cost of Toxic Substance Control Act 8(e) processing and searches.			7	5	Percent Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Reduction in cost of managing PreManufacture Notice (PMN) submissions through the Focus meeting as a percentage of baseline year cost				61	Percent Reduction

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization Reports completed.			1260	1585	HPV Chemicals

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent reduction from baseline year in total EPA cost per chemical for which proposed AEGL value sets are developed.	12.6	2	4	6	Percent Cost Savings

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Cumulative number of High Production Volume (HPV) chemicals with Risk Based Decisions Completed.	No Target Estab-lished	No Target Estab-lished	150	490	HPV Chemicals

The cumulative and annual number of chemicals with proposed values for AEGLs supports the Homeland Security program area. This program has consistently exceeded its performance targets reflecting significantly greater than expected progress in developing Proposed AEGL values due in part to unanticipated opportunities to develop values for categories of similar chemicals. The AEGL Program has exceeded its annual performance target of 24 Proposed AEGL values by completing 33 chemicals in FY 2007. Cumulative results demonstrate a total of 218 proposed AEGLs completed and demonstrate significant progress towards completing 287 chemicals by 2011. In FY 2009, the program is shifting its emphasis to interim and final status AEGLs, which explains the reduction in the target for developing proposed values from 2008 to 2009.

The cumulative and annual reductions in the production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities measures track EPA's progress in reducing risks from chemicals under TSCA. These measures are based on the Risk Screening Environmental Indicator (RSEI) model, which calculates a risk index based on releases of Toxics Release Inventory (TRI) chemicals. The Agency's long-term strategic target is to achieve a 50 percent cumulative reduction of RSEI chronic human health risk index by 2011. Data received through FY 2005 indicate a 29.3 percent reduction in the RSEI score. The decline curve for RSEI decreases is expected to become less steep over time. Accordingly, annual targets are more ambitious in FY 2006 (4.5 percent) than they are in 2011 (2.5 percent). TRI data are subject to a two-year data lag, which means this measure has a corresponding delay in reporting on results. FY 2006 performance results will be available for the FY 2008 Performance and Accountability Report.

A subset of the overall RSEI measure examines the cumulative and annual reductions in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals. These measures look at the RSEI score for a subset of 200 HPV chemicals that are reported through the TRI. A long-term target of 45 percent cumulative reduction is set for 2011. The data from TRI are also subject to a two-year data lag, which means this measure has the same delay in reporting on results as the RSEI measure above. FY 2006 performance results will be available for the FY 2008 Performance and Accountability Report.

A supporting annual measure for the HPV program tracks the cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization reports completed. This measure tracks Hazard Characterization reports for both U.S. and internationally assessed chemicals. The program has set an ambitious target to complete

Screening Level Hazard Characterization reports for 2,750 HPV chemicals by 2012. In FY 2007, reports were completed for 301 HPV chemicals, exceeding the FY 2007 target of 259 and bringing cumulative progress to 931 chemicals.

The AEGL program shares resources with the "Homeland Security: Preparedness, Prevention and Response" and "Toxic Substances: Chemical Risk Review and Reduction" programs.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,172.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$1,225.0) This reduces congressionally-directed funding in the FY 2008 omnibus for HPV and VCCEP. The reduction will not impact long-term targets.

- (+$858.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funding will support HPV and VCCEP programs as well as other priority toxic chemical reviews.

Statutory Authority:

TSCA.

Pollution Prevention Program

Program Area: Toxics Risk Review and Prevention
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$17,548.6***	***$19,935.0***	***$16,362.0***	***$18,398.0***	***$2,036.0***
Total Budget Authority / Obligations	$17,548.6	$19,935.0	$16,362.0	$18,398.0	$2,036.0
Total Workyears	87.2	88.6	88.6	86.6	-2.0

Program Project Description:

The Pollution Prevention (P2) program is one of EPA's primary tools for encouraging environmental stewardship by the Federal government, industry, communities, and individuals, both domestically and globally. The program employs a combination of collaborative efforts, innovative programs, and technical assistance and education to support stakeholder efforts to minimize and prevent adverse environmental impacts by preventing the generation of pollution at the source. For more information, please visit http://www.epa.gov/p2/.

FY 2009 Activities and Performance Plan:

Environmentally Preferable Purchasing (EPP) Program

The goal of this program is for the Federal government to serve as a model to others for environmental stewardship through incorporating environmental considerations into routine purchasing decisions. In FY 2009, EPA will continue to provide leadership to implement EPP efforts in partnership with other Federal agencies, notably to continue to implement, add new federal partners, and measure the benefits of the Federal Electronics Challenge and to promote the use of the Electronic Product Environmental Assessment Tool (EPEAT), a procurement tool designed to help institutional purchasers compare and select desktop computers, laptops, monitors, and other equipment based on environmental attributes. FY 2009 work on EPEAT will involve the development, through a consensus-based stakeholder process, of new standards for additional electronic products, likely including televisions, imaging equipment, mobile devices and/or servers. The program also will implement a partnership with the General Services Administration (GSA) to continue to "green" government meetings.

EPA will allocate $4.4 million to this work area in FY 2009. See http://www.epa.gov/oppt/epp/pubs/about/about.htm for more information.

Green Suppliers Network

Through this program, EPA partners with large manufacturers to help small and medium-sized suppliers identify opportunities to "lean and clean" their operations. These activities help suppliers save money and reduce their environmental impacts. The Green Suppliers Network will continue to partner with the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) program and state pollution prevention programs to deploy the program across the nation's largest manufacturing supply chains. In FY 2009 the program will work to train states and MEP centers delivering the Green Suppliers Network reviews on the latest "lean and clean" tools to ensure that reviews are consistent and making use of the most advanced techniques. The Green Suppliers Network will also in FY 2009 continue to strengthen its measurement efforts by implementing a results algorithm to support reporting rigorous and defensible program results.

As part of the program's continuing focus on emerging issues and chemicals of national concern, the program will work with the automobile industry, under its Suppliers' Partnership for the Environment organization, to develop a framework through which EPA risk screening tools can be used by suppliers to make more informed decisions regarding chemical use and substitutions. The program will also work with the Department of Energy to coordinate the "lean and clean" activities of the Green Suppliers Network with the energy efficiency technical assistance of DOE's Industrial Assessment Centers.

EPA will allocate $3.3 million to this work area in FY 2009. For more information, visit http://www.greensuppliers.gov/gsn/home.gsn.

Green Chemistry

This program emphasizes the development of new chemistries that cost less, eliminate or reduce hazardous chemical usage and waste, and eliminate the need for potentially dangerous processes and end-of-pipe controls. In FY 2009 the Green Chemistry program will continue to administer the Presidential Green Chemistry Challenge and associated award ceremony and will focus on the development of environmentally preferable substitutes for chemicals of national concern.

EPA will allocate $2.4 million to this work area in FY 2009. For more information, visit http://www.epa.gov/opptintr/greenchemistry/.

Design for the Environment

The Design for the Environment (DfE) Program works in partnership with a broad range of stakeholders to reduce chemical risks to people and the environment by preventing pollution through development and assessment of safer alternatives. DfE convenes partners, including industry representatives and environmental groups, to evaluate the human health and environmental considerations, performance, and cost of traditional and alternative technologies, materials, and processes. As incentives for participation and driving change, DfE offers unique technical tools, methodologies, and expertise. EPA's DfE program has reached more than

200,000 business facilities and approximately two million workers, reducing the use of chemicals of concern by approximately 205 million pounds per year.

In FY 2009, DfE will continue collaborating with industry and non-governmental organizations in two focus areas to reduce risk from chemicals. First, DfE's Formulator Program encourages partners to reformulate products to be environmentally safer, cost competitive, and effective. By providing chemical and toxicological information and suggesting safer substitutes, the Formulator Program reduced an estimated 57 million pounds of chemicals of concern in 2006, up from 40 million pounds in 2005. DfE is now working with the consumer cleaning products sector. Large chemical volumes are used in this sector, with the potential for substantial population and environmental exposures that can be reduced through reformulation.

Second, DfE will continue to conduct Alternatives Analysis to Inform Substitution to safer chemicals. In FY 2009 DfE will leverage partnerships with the electronics, wire and cable, polyurethane foam, chemical product formulation, furniture, and photovoltaic industries to help move these industries toward the manufacture, processing and use of safer chemicals, reducing the likelihood of unintended environmental and human health effects and associated liabilities. DfE partnerships will help these industries move away from substances that are considered health and environmental hazards, including lead, chromium, diisocyanates, and certain flame retardants, and to ensure the transition to alternative chemical substances that are safer for human health and the environment.

EPA expects these new partnerships to produce measurable results in FY 2009, such as the replacement of approximately 18.7 million pounds of flame retardants (a fully-realized result of the DfE partnership with the furniture industry to find safer flame retardants for furniture foam) and as much as 158 million pounds of lead per year with safer lead-free solder alternatives.

In FY 2009, the related Green Engineering Program will continue partnerships with industries, states and other interested parties to apply green engineering approaches on specific industrial projects and continue to identify and leverage resources with other interested organizations. For example, the Green Engineering Program is collaborating with the FDA, academia, and industry on regional workshops to advance the incorporation of green engineering approaches and tools in pharmaceutical processes with an aim towards reducing their environmental impact. The program also partners with the Center for Sustainable Engineering, which was established via NSF funding, to further disseminate green engineering educational materials that were developed through the Green Engineering Program. EPA will allocate $3.2 million to this work area in FY 2009.

Partnership for Sustainable Healthcare (PSH)

This voluntary program, formerly known as the Hospitals for a Healthy Environment (H2E) Program with more than 1,250 Hospital Partners, became an independent non-profit organization in 2006, the first to do so in the history of EPA voluntary programs, significantly reducing EPA's costs for administering the program. Under the PSH Program, EPA will continue to coordinate agency work that improves the environmental performance of the healthcare sector by providing technical expertise and facilitating cooperative working relationships with other programs such

as Energy Star, Green Suppliers Network and EPEAT while the independent PSH organization continues to provide outreach, education, and recognition programs. In its current capacity, PSH is participating in EPA rule making workgroups in the area of pharmaceutical waste management. In addition, because significant amounts of the mercury found in air deposition in the U.S. originate in other countries, EPA is directing a series of pilot healthcare mercury reduction programs on an international scale, including programs in China, Argentina, Taiwan, India and Central America.

EPA will allocate $160 thousand to this work area in FY 2009. For more information, visit http://www.epa.gov/oppt/pollutionprevention/pubs/h2e.htm.

P2 Technical Assistance

As directed by the Pollution Prevention Act, the P2 program devotes considerable effort towards assisting industry (primarily small and medium sized businesses), government and the public in implementing pollution prevention solutions to chemical risk and other environmental protection challenges. In addition to the P2 Grants to States and Tribes and the P2Rx programs described under the companion Categorical Grants: Pollution Prevention program project, resources under this program are made available to a wide variety of applicants through Source Reduction Assistance (SRA) grants issued annually through EPA's Regional Offices. Thirty four SRA Grants were awarded in FY 2007, with similar numbers of awards anticipated in FY 2008 and FY 2009, supporting P2 solutions resulting in energy and water conservation, reduction of green house gases, and a wide variety of reduction in the use of hazardous materials and generation of other pollutants. Projects include Healthy Schools initiatives, toxics use reduction training, home and business light bulb replacement, mining operation improvement, state agency staff training, safer health care delivery, groundwater protection, and greening meetings, conferences, and buildings. EPA will allocate $5.0 million of EPM resources to this work area in FY 2009, augmented by $4.9 million of P2 Categorical Grant resources.

EPA's Pollution Prevention Program underwent PART review in 2006 and received a "moderately effective" rating and the third highest point rating awarded to EPA programs through that date, confirming that the program produces important environmental results in a well-managed and efficient manner. The PART improvement plan recommended that EPA evaluate and implement Science Advisory Board Report recommendations for improving performance measures to better demonstrate Pollution Prevention results, work to reduce barriers confronted by industry and others in attempting to implement source reduction, fully implement Grant Track and the P2 State Reporting System, and develop additional efficiency measures, all of which will be brought to completion prior to and during FY 2009.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Business, institutional and government costs reduced by P2 program participants.			45.9 M	67.8 M	Dollars Saved

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of hazardous materials reduced by P2 program participants.			429 M	494 M	Pounds

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Percent change from baseline in reductions of Design for the Environment (DfE) chemicals of concern per federal dollars invested in the DfE program.			3	4	Percentage

The Pollution Prevention Program has two PART-approved performance measures and two GPRA measures that are directly linked to its own interventions. These measures target and document a broad range of the program's environmental benefits and integrate performance results contributions from all components of the program. The program has demonstrated substantial progress in achieving its established targets for its annual and long term goals.

The P2 Program has made significant progress towards meeting long-term goals for 2011 outlined within PART and the Agency's Strategic plan.

- The P2 program has set a long term target to reduce 4.5 billion pounds of hazardous materials. Data currently available indicate 2 billion pounds of hazardous materials have been reduced since FY 2000.

- Significant progress has also been made in meeting the long term target to save $792 million in business, government, and institutional costs as the P2 program has saved $178 million since 2002.

- The P2 Program has achieved more than half of its long term target to reduce, conserve or offset 31.5 trillion BTUs by reducing 8 trillion BTUs since 2002.

- The P2 Program also has made progress in meeting the long term target to reduce 19 billion gallons of water use by reducing 9.4 billion gallons of water since 2000.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-2.0 FTE) This reduction reflects a transition of pollution prevention programs to the private sector.

- (+$1,814.0) This increase will restore funding for grants and projects necessary to pursue 2011 Agency strategic targets for reductions of 4.5 billion pounds of hazardous materials use, 31.5 trillion BTUs of energy use, 220 million gallons of water use, and $792 million in business, government and institutional costs.

- (+$26.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

- (+$196.0) This reflects an increase for payroll and cost of living for all FTE.

Statutory Authority:

PPA and TSCA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$8,249.6***	***$5,654.0***	***$5,585.0***	***$6,027.0***	***$442.0***
Total Budget Authority / Obligations	$8,249.6	$5,654.0	$5,585.0	$6,027.0	$442.0
Total Workyears	51.5	33.4	33.4	33.4	0.0

Program Project Description:

EPA has established national programs to promote reductions in use and to ensure safe removal, disposal and containment of certain prevalent, high-risk chemicals. Some of these chemicals were introduced into the environment before their risks were known. These chemicals include polychlorinated biphenyls (PCBs), mercury, and asbestos/fibers. The Chemical Risk Management program focuses on providing assistance to Federal agencies and others with responsibility for ensuring proper use of PCBs, reducing or eliminating the use of devices containing mercury, and implementing statutory requirements to address asbestos risks in schools.

FY 2009 Activities and Performance Plan:

Polychlorinated Biphenyls (PCBs)

In FY 2009, EPA will provide assistance on issues related to PCB use, distribution in commerce, manufacture, processing, and import and/or export for use or management other than disposal. These issues also include excluded manufacturing processes, storage for reuse, and the uncontrolled burning of materials containing PCBs. EPA also will consider any possible regulatory changes to address manufacturing processes that inadvertently generate PCBs as well as review existing use authorizations as needed. Some uses of PCB's are relatively old and could benefit from being revisited. Assessments will determine whether some existing uses need to be phased out.

EPA will provide technical assistance to facilitate the development of legislation for the U.S. ratification of the Stockholm Convention, which was signed by the United States on May 23, 2001 and which entered into force without U.S. ratification on May 17, 2004. The passage of legislation to implement the Stockholm Persistent Organic Pollutants (POPs) Treaty is a priority for EPA. Upon ratification, EPA will, among other requirements, take action to meet Convention obligations on PCBs in electrical equipment by 2025.

Mercury

In FY 2009, EPA will continue to promote the reduction of mercury use in products, both domestically and internationally. The program maintains its work with the states and relevant stakeholders to create strategies for addressing the use of mercury in products such as measuring devices (e.g., thermostats and thermometers, switches and relays) and lighting. The program will implement as appropriate regulatory and educational programs to achieve the Agency's goal of addressing mercury exposure from use and disposal of mercury-containing products. The program will work through the states or through existing federal programs, including voluntary efforts with the private sector, to phase out the use of mercury in products where viable alternatives exist.

The program continues to update and expand its mercury use and products database. This database identifies potential products containing mercury and product alternatives and will help identify opportunities for risk reduction efforts including collaborative efforts to reduce the use of mercury.

In FY 2009, EPA will continue to implement its activities under the United Nations Environment Program (UNEP) Mercury Partnerships. Under these global mercury partnerships, the Agency is helping to promote the use of non-mercury products, develop mercury products inventory assessments and databases, and implement mercury-free programs in hospitals, schools and other sectors around the world. The program will continue to track mercury reductions from the UNEP mercury partnerships and build from successful pilots and lessons learned from these projects.

Asbestos/Fibers

The Agency will continue its outreach and technical assistance under the asbestos program for schools, in coordination with other Federal agencies, states, and organizations such as the National Parent-Teachers Association, and the National Education Association. EPA also will continue to provide oversight and regulatory interpretation to delegated state and local asbestos demolition and renovation programs, respond to tips and complaints regarding the Asbestos-in-Schools Rule, respond to public requests for assistance, and help asbestos training providers comply with the Model Accreditation Plan requirements. For more information, visit www.epa.gov/oppt.

Performance Targets:

Work under this program supports EPA's objective to prevent and reduce chemical risks to humans, communities, and ecosystems. Currently, there are no performance measures specific to this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$186.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$256.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support across programs.

Statutory Authority:

TSCA; ASHAA; AHERA; AIA.

Toxic Substances: Lead Risk Reduction Program
Program Area: Toxics Risk Review and Prevention
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$12,589.8***	***$13,546.0***	***$13,335.0***	***$13,652.0***	***$317.0***
Total Budget Authority / Obligations	$12,589.8	$13,546.0	$13,335.0	$13,652.0	$317.0
Total Workyears	76.5	87.0	87.0	87.0	0.0

Program Project Description:

EPA's Lead Risk Reduction program alleviates the threat to human health, particularly to young children, posed by exposure to lead-based paint and other sources of lead in the environment. The Agency is working to maintain a national infrastructure of trained and certified lead remediation professionals; establish hazard control methods and standards to ensure that homeowners and others have access to safe, reliable and effective methods to reduce lead exposure; maintain a national infrastructure of lead remediation professionals trained and certified to implement those standards; and provide information to housing occupants so they can make informed decisions about lead hazards in their homes. See http://www.epa.gov/opptintr/lead/index.html for more information.

FY 2009 Activities and Performance Plan:

In FY 2009 EPA will implement a final regulation and a comprehensive program to address lead hazards created by renovation, repair and painting activities in homes with lead-based paint. To implement the Renovation, Repair and Painting (RRP) Rule, EPA will accredit training providers in all non-authorized states, tribes and territories; review state applications for authorization to administer training and certification programs; provide oversight and guidance to all authorized programs; and continue to disseminate model training courses for lead-safe work practices. Additionally, a significant outreach program will be implemented to support the RRP regulation including:

- Comprehensive education efforts aimed at all regulated parties including states, tribes, and territories
- Informing the regulated community about the improved test kits developed by the program in FY 2007 and 2008; and
- Providing assistance for complying with the RRP rule requirements.

The Agency will continue to provide education and outreach to the public on the hazards of lead-contaminated paint, dust, and soil, with particular emphasis on low-income communities in support of the program's goal to reduce disparities in blood lead levels between low-income children and other children. The program also will implement existing lead hazard reduction regulations and provide technical and policy assistance to states, tribes, and other Federal agencies. EPA will continue these efforts as work progresses on virtually eliminating childhood lead poisoning by 2010.

In addition, EPA will continue to provide support to the National Lead Information Center (NLIC) to disseminate information to the public primarily in electronic form. The Agency also will support HUD's lead hazard control program by ensuring that all contractors who identify or abate lead and lead hazards as part of HUD's Lead-Based Paint Grant Program are properly trained and certified.

The Lead program underwent its first PART assessment in FY 2005, receiving a "moderately effective" rating and the third highest points rating of all EPA programs assessed through that date. Through the PART, EPA introduced a new long-term and annual results measure (percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old), and a new efficiency measure (annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process).

Through the PART Improvement Plan process, EPA improved the consistency of grantee and regional accountability and the linkage between program funding and program goals with an emphasis on program grant and contractor funding. In FY 2009, the Agency will implement recently completed PART follow-up actions to improve measures used in the State Grant Reporting Template and further improve results reporting from program partners. For more information, visit http://www.epa.gov/opptintr/lead/index.html.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process.	92	90	91	92	Percent Certif/Refund

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl).	No Target Estab-lished	No Target Estab-lished	90,000	No Target Estab-lished	Children

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old.	No Target Estab-lished	No Target Estab-lished	29	No Target Estab-lished	Percent

The Lead Program's annual efficiency measure tracks improvements in certification application time for lead-based paint professionals and refund applications. Certification work represents a significant portion of the lead budget and overall efficiencies in management of certification activities will result in numerous opportunities to improve program management effectiveness and efficiency. In FY 2007, this measure was revised to measure EPA processing time only, which resulted in a reduction in the number of days to process applications, from 40 days to 20 days. Since 2004, the percent of applicants processed under 20 days has increased from 77 to 92 percent. The FY 2008 and 2009 targets sustain this high level of achievement.

The program's long-standing annual performance measure tracks the number of children aged 1 to 5 years with elevated blood lead levels (> or = 10 ug/dL). Data are collected from the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (NHANES). NHANES is recognized as the primary database in the United States for national blood lead statistics. Data are collected on a calendar year basis and released to the public in two-year data sets. In May 2005, NHANES released 1999-2002 data which estimated 310,000 cases of children with elevated blood lead levels, demonstrating a continued downward trend towards reaching EPA's long-term target of zero cases by 2010. In 2006 EPA's goal was to lower the amount to 216,000 cases, and in 2008 the goal is to lower to 90,000 cases. The Fourth National Report on Human Exposure to Environmental Chemicals is expected in the summer of 2008, at which time 2004 actual data will be available. CDC historical data are showing a slower rate of progress over time, reflecting increased challenges associated with reaching remaining vulnerable populations.

The program's second annual performance measure is also based on NHANES data and examines the disparities of blood lead levels in low-income children compared to non low-income children. The program uses this performance measure to track progress toward eliminating childhood lead poisoning in harder to reach vulnerable populations. EPA's long-term goal, reflected in the 2006-2011 Strategic Plan, is to close the gap between the geometric means of blood lead levels among children of low income families versus children of non-low-income families, from a baseline percentage difference of 37 percent (1991-1994), to a difference of 28 percent by the year 2010. In May 2005, NHANES released data which estimated the disparity of blood lead levels between low-income and non-low income children at 32 percent. Actual data for 2006 is expected in 2009, at which time it will be clearer if EPA reached its goal of lowering the disparity to 29 percent.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$405.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$88.0) This change is the net of the restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs, and savings from efficiencies.

Statutory Authority:

TSCA.

Program Area: Underground Storage Tanks (LUST / UST)

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$9,836.7***	***$11,719.0***	***$11,572.0***	***$12,256.0***	***$684.0***
Leaking Underground Storage Tanks	$14,996.1	$10,558.0	$11,968.0	$10,548.0	($1,420.0)
Total Budget Authority / Obligations	$24,832.8	$22,277.0	$23,540.0	$22,804.0	($736.0)
Total Workyears	112.7	131.3	131.3	132.0	0.7

Program Project Description:

EPA works with states, tribes and Intertribal Consortia to prevent, detect, and clean up leaks into the environment from Federally-regulated underground storage tanks (USTs) containing petroleum and hazardous substances. Achieving significant improvements in release prevention and detection requires a sustained emphasis by both EPA and its partners. Potential adverse effects from the use of contaminants of concern such as benzene, or methyl-tertiary-butyl-ether (MTBE) in gasoline further underscores EPA's and the states' emphasis on promoting compliance with all UST requirements, including the requirements described in the Energy Policy Act (EPAct)[67] of 2005. EPA provides technical information, forums for information exchanges and training opportunities to states, tribes and Intertribal Consortia to encourage program development and/or implementation of the UST program.[68]

The states are the primary enforcers of the UST program requirements. EPA has adopted a decentralized approach to UST program implementation by building and supporting strong state and local UST programs. Although EPA is responsible for implementing the UST program in Indian country, the Agency is working with tribes to strengthen their own UST programs. EPA will use EPM funds to carry out EPA's responsibilities under Title XV, Subtitle B of the EPAct.

FY 2009 Activities and Performance Plan:

The EPAct contains numerous provisions that significantly affect Federal and state UST programs. The EPAct requires that EPA and states strengthen tank release prevention programs, through such activities as: mandatory inspections every three years for all underground storage tanks, operator training, prohibition of delivery for non-complying facilities and secondary containment or financial responsibility for tank manufacturers and installers[69]. In FY 2009, EPA will continue to focus attention on the need to bring all UST systems into compliance and keep

[67] http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ058.109.pdf Energy Policy Act of 2005; Title XV - Ethanol And Motor Fuels, Subtitle B – Underground Storage Tank Compliance, on pages 500-513.
[68] Refer to http://www.epa.gov/OUST/20comply.htm and http://www.epa.gov/OUST/20tnkprf.htm.
[69] For more information on these and other activities please refer to http://www.epa.gov/OUST/fedlaws/final_fr.htm.

them in compliance with the release detection and release prevention requirements. These activities include assisting states in conducting inspections and assisting other Federal agencies to improve their compliance at UST facilities.

In FY 2009, EPA will continue promoting cross-media opportunities to support core development and implementation of state and Tribal UST programs; strengthening partnerships among stakeholders; and providing technical assistance, compliance assistance, and training to promote and enforce UST facilities' compliance. To help states and tribes implement the UST prevention program, EPA will continue to provide assistance to states developing new requirements to implement the EPAct requirements, and will provide training opportunities and assistance tools to better prepare UST inspectors and better inform UST owners. The training modules[70] provide UST inspectors with core and advanced knowledge on how to inspect an UST system. EPA will also continue to monitor and address the impact of releases from USTs.

EPA has the primary responsibility for implementation of the UST Program in Indian country and to maintain information on USTs located in Indian country. EPA also will implement the UST Tribal strategy[71] developed in FY 2006, including developing regulatory requirements for secondary containment, delivery prohibition, and operator training in Indian country.

The Agency and states also will continue to use innovative compliance approaches, along with outreach and education tools, to bring more tanks into compliance and to prevent releases, saving over $100 thousand in cleanup costs for each release prevented. For example, the emergence of alternative fuels containing ethanol poses several challenges for the UST program, requiring information, education, and innovative policy solutions.

The UST (prevention) program received an overall PART rating of "moderately effective" in 2006. As a component of the program's improvement plan, EPA worked with its state partners to develop an efficiency measure of the annual confirmed releases per the annual underground storage tanks leak prevention costs.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Increase the rate of significant operational compliance by 1% over the previous year's target.	63	67	68	69	percent

[70] *UST-LUST Virtual Classroom,* http://www.epa.gov/swerust1/virtual.htm.
[71] Refer to *Strategy for an EPA/Tribal Partnership to Implement Section 1529off the EPAct of 2005*, August 2006, EPA-510-F-06-005, http://www.epa.gov/OUST/fedlaws/final_ts.htm.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	No more than 10,000 confirmed releases per year.	7,570	<10,000	<10,000	<10,000	UST releases

Work under this program supports EPA's objectives under Goal 3. The program has set a challenging and ambitious goal of increasing significant operational compliance (SOC) by 1 percent per year from the 2004 baseline of 64 percent. The program did not meet the GPRA goal for the SOC rate in FY 2007 because some states inspected previously uninspected facilities in response to the EPAct. States found that many previously uninspected facilities did not comply with requirements. This likely contributed to the lower compliance rate.

The program also measures confirmed releases reported each year, with a goal of fewer than 10,000 releases each year. Between FYs 1999 and 2007, confirmed UST releases averaged 9,052. In FY 2007, there were 7,570 confirmed UST releases.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$427.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$257.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across the program.
- (+0.7 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Reauthorization Amendments of 1986 (Subtitle I), Section 8001(a) and (b) as amended by the Hazardous and Solid Waste Amendments of 1984 (P.L. 98-616); and the EPAct, Title XV - Ethanol And Motor Fuels, Subtitle B - Underground Storage Tank Compliance, Sections 1521 - 1533, P.L. 109-58, 42 U.S.C. 15801; RCRA of 1976.

Program Area: Water: Ecosystems

Great Lakes Legacy Act
Program Area: Water: Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$24,296.7***	***$35,000.0***	***$34,454.0***	***$35,000.0***	***$546.0***
Total Budget Authority / Obligations	$24,296.7	$35,000.0	$34,454.0	$35,000.0	$546.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Great Lakes Legacy Act Program cleans up contaminated sediments in the U.S. or bi-national Great Lakes Areas of Concern (AOCs). An AOC is a geographic area that fails to meet the objectives of the Great Lakes Water Quality Agreement where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life. The Great Lakes Legacy Act targets resources to clean up contaminated sediments, a significant source of Great Lakes toxic pollutants that can impact human health via the bio-accumulation of toxic substances through the food chain. Contaminated sediments are the cause of or significantly contribute to as many as 11 of the 14 impairments to beneficial uses (including restrictions on fish consumption due to high contaminant levels in fish tissue) in AOCs.[72] A quantitative estimate of the impact on fish tissue contamination is not available, however sediment remediation activities will contribute to the reduction of Polychlorinated Biphenyls (PCBs) and other contaminants by removing significant quantities of contaminants (or by capping to reduce the biological availability of contaminants).

FY 2009 Activities and Performance Plan:

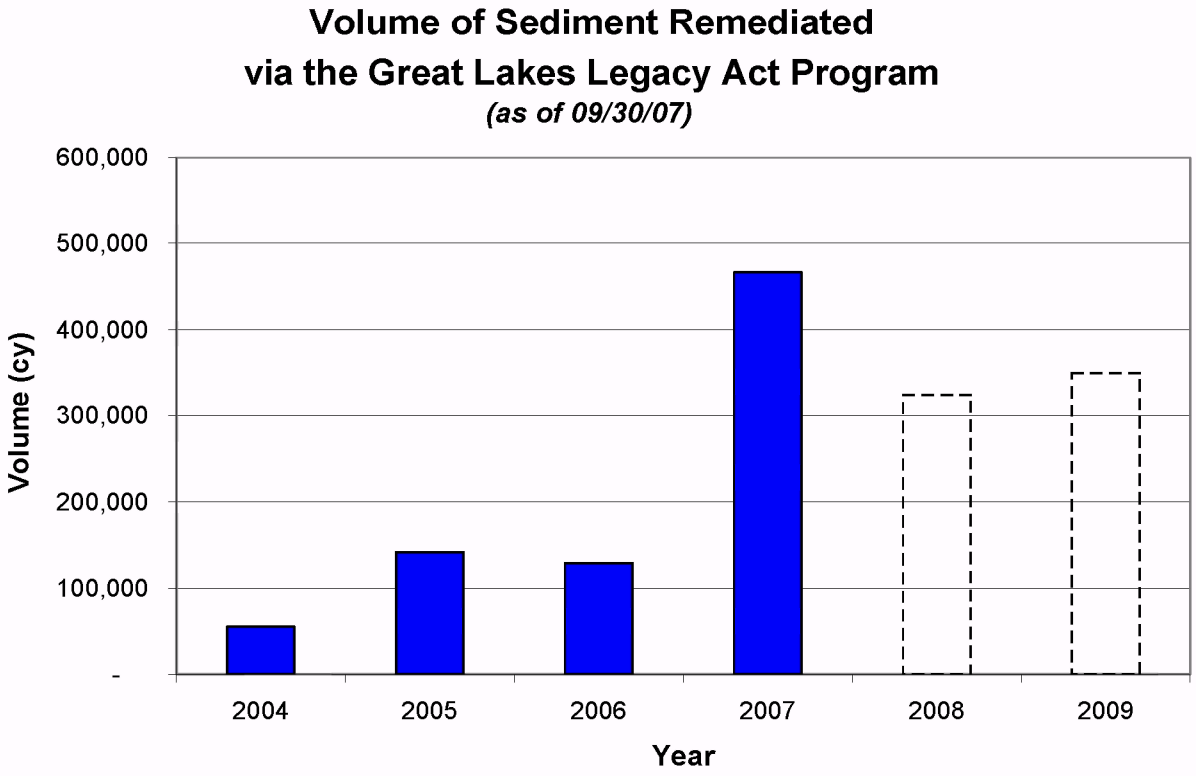
The total contaminated sediment remediation need in the Great Lakes as of 1997 is estimated to have been about 46 million cubic yards.[73] Reporting in 2009 is expected to show that EPA and its partners will have remediated a cumulative total of 5.5 million cubic yards of contaminated sediments from calendar year 1997, when tracking began, through calendar year 2008.

[72] International Joint Commission – Sediment Priority Action Committee, Great Lakes Water Quality Board. 1997. *OVERCOMING OBSTACLES TO SEDIMENT REMEDIATION in the Great Lakes Basin.* http://www.ijc.org/php/publications/html/sedrem.html.

[73] USEPA-Great Lakes National Program Office. December 2006. *Unpublished Report in Great Lakes National Program Office Sediment Files.*

Remediation from Legacy Act projects will contribute to this growing total. In FY 2009, EPA expects to support two to four Legacy Act projects for remediation. These projects are expected to clean up some three hundred fifty thousand cubic yards of contaminated sediments over the project lifetimes. Project lifetimes are expected to be from six months to several years. The Great Lakes Legacy Act rule outlines how projects are prioritized to remediate contaminated sediments in the Great Lakes AOCs.

(See www.epa.gov/glla for more information.)



Source: USEPA – Great Lakes National Program Office, December 2007.[74]

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes.	4.5	4.5	5.5	5.5	Million Cubic Yards

[74] *Volume of Sediment Remediated in the Great Lakes Legacy Act Program, December 2007*. Available from Great Lakes National Program Office Sediment Files. Projections are based on a cost-based formula for 2008 and 2009. Some of the remediation expected to occur in 2006 was delayed, resulting in lower-than-expected results for 2006 and higher-than-expected remediation for 2007.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Cost per cubic yard of contaminated sediments remediated.				200	Dollars/ Cubic Yard

Sediment remediation in the U.S. portion of the Great Lakes in recent years has varied from 134,000 cubic yards in 1997 to 975,000 cubic yards in 2003, with year-to-year variances of 3,000 cubic yards to 800,000 cubic yards.[75] The amount of remediation in a given year has been largely dependent on the possibility of enforcement actions in various EPA programs. With the Great Lakes Legacy Act, EPA now has a program in place that can make steadier progress toward addressing the remaining contaminated sediments in Great Lakes AOCs.

The EPA Great Lakes Program received an "adequate" PART rating in 2007.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$546.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

2002 Great Lakes and Lake Champlain Act (Great Lakes Legacy Act); CWA; Coastal Wetlands Planning, Protection, and Restoration Act of 1990; Estuaries and Clean Waters Act of 2000; North American Wetlands Conservation Act; WRDA; 1990 Great Lakes Critical Programs Act; 1909 The Boundary Waters Treaty; 1978 GLWQA; 1987 GLWQA; 1987 Montreal Protocol on Ozone Depleting Substances; 1996 Habitat Agenda; 1997 Canada-U.S. Great Lakes Bi-national Toxics Strategy; U.S.-Canada Agreements.

[75] USEPA-Great Lakes National Program Office. *Sediment Remediation*. Available at: http://www.epa.gov/glnpo/glindicators/sediments/remediateb.html.

National Estuary Program / Coastal Waterways
Program Area: Water: Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$21,474.8***	***$17,203.0***	***$26,779.0***	***$17,239.0***	***($9,540.0)***
Total Budget Authority / Obligations	$21,474.8	$17,203.0	$26,779.0	$17,239.0	($9,540.0)
Total Workyears	50.1	53.1	53.1	48.1	-5.0

Program Project Description:

The goal of this program is to restore the physical, chemical, and biological integrity of the nation's estuaries and coastal watersheds by protecting and enhancing water quality and living resources. Major areas of effort include:

- Supporting the 28 National Estuary Programs' (NEPs): (1) continued implementation of Comprehensive Conservation and Management Plans (CCMPs) and (2) implementation of Clean Water Act (CWA) core programs in their estuarine ecosystems;

- Coastal monitoring and assessment, including the continued issuance of National Coastal Condition Reports; and

- Supporting non-NEP coastal watershed efforts to address major threats to the health of estuary/coastal waters and coastal watersheds, including such activities as targeting hypoxia in the Gulf of Mexico, assisting communities and/or organizations to find financing for coastal protection and restoration, smart growth and green infrastructure, and adaptation to climate change by estuaries.

(See http://www.epa.gov/owow/estuaries/ for more information.)

FY 2009 Activities and Performance Plan:

The resources in FY 2009 will support EPA's goal of protecting our national estuaries of significance and other estuarine/coastal watersheds, and protecting and restoring additional acres of habitat in NEP study areas. This work will be undertaken in partnership with states, tribes, coastal communities and others. Estuarine and coastal waters are among the most environmentally and economically valuable resources in the nation.

The National Estuary Program

In FY 2009, EPA will continue support of the National Estuary Program, including $7,432,000 in CWA Section 320 grants for the 28 NEPs ($265,400 per NEP) to continue to support this flagship watershed protection program to help address continuing and emerging threats to the nation's estuarine resources.[1] This includes continued support of CCMP implementation as well as implementation by NEPs of CWA core programs. Specifically, EPA's activities include:

- Supporting continuing efforts of all 28 NEP estuaries to maintain their leadership in promoting environmental sustainability through implementation of their CCMPs, which target protection and restoration of estuarine resources, including conducting fiscal and programmatic oversight and performance evaluation of CCMP implementation.

- Supporting efforts to achieve the EPA habitat restoration and protection goal of 250,000 additional acres by 2012.

One growing concern in U.S. coastal watersheds is the effects of climate change, such as sea level rise, changes in precipitation, increases in intensity of and damage from storms, and changes in commercial and ecologically significant species. EPA will begin work with our NEP partners and other coastal watersheds to identify, develop, and communicate about programs that already reduce the effects of climate change or could be modified to better address those effects; *e.g.*, promote appropriate "climate-ready estuaries" by engaging coastal communities in planning, development, and implementation of activities to reduce energy use and adapt to climate change.

This program was included in OMB's PART assessment, Ocean, Coastal, and Estuary Protection, completed in 2005, and was rated "adequate." The National Estuary Program/Coastal Watersheds and the Marine Pollution Control programs were combined and reviewed under this PART review. As a result of the PART evaluation, the program has improved its NEP data reporting and tracking system. The program began testing the system in FY 2006 and moved to full-scale implementation in FY 2007. The program has developed more ambitious targets for its annual and long-term measures regarding the number of acres protected and restored. In addition, we have improved our NEP implementation review program, now known as the Performance Evaluation Review process, to make it more objective and consistent. The comprehensive triennial reviews of each NEP evaluate the progress an NEP has made in reaching environmental and programmatic goals; enhancements will make the reviews more useful in future funding decisions as well as in future PART evaluations.

Acreage-related opportunities for habitat restoration and protection are expected to diminish over time due to the fixed boundaries of NEPs. Also, population growth and increased pressure on coastal resources present significant challenges to improvements in estuarine habitat quality.

[1] The means and strategies outlined here for achieving the Increase Wetlands sub-objective must be viewed in tandem with the means and strategies outlined under the Improve Ocean and Coastal Waters sub-objective. The Improve Ocean and Coastal Waters sub-objective contains strategic measures for EPA's vessel discharge, dredged material management, ocean disposal, and other ocean and coastal programs, which are integral to the Agency's efforts to facilitating the ecosystem scale protection and restoration of natural areas.

The PART improvement plan calls for EPA to set ambitious long-term and annual acreage targets for the NEPs and their partners, and EPA has responded to that challenge.

Coastal Monitoring and Assessment

EPA, working with Federal, state, and local partners, will continue to track the health of coastal waters and progress in meeting NEP/Coastal Watershed strategic targets by issuing future editions of a National Coastal Condition Report (NCCR), supporting efforts to monitor and assess U.S. coastal waters, and developing additional indicators of coastal ecosystem health. The NCCR is the only statistically-significant measure of coastal water quality on nationwide and regional scales, and includes indices covering coastal water quality, sediment quality, benthic condition, coastal habitat, and fish tissue contamination. The PART improvement plan calls for a long-term improvement in the national score for aquatic ecosystem health of coastal waters. This is expected to result in an overall improvement in the quality of the coastal environment based on indicators such as increased dissolved oxygen, reduction in nitrogen and phosphorus, greater water clarity, reduction in sediment contaminants, healthier benthic communities, increased acres of habitat, and reduced contamination in targeted fish and shellfish species.

Information on coastal ecological condition generated by the NCCR can be used by resource managers to efficiently and effectively target water quality actions and manage those actions to maximize benefits. The NCCR is based on data gathered by various Federal, state, and local sources using a probability design that allows extrapolation to represent all coastal waters of a state, region, and the entire U.S.

Other Coastal Watersheds

In FY 2009, EPA will continue other coastal watershed work, including:

- *Gulf Hypoxia*: EPA's role in implementing the *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico* (Plan) will not only require overall leadership in coordinating activities among Federal and state agencies, but also places EPA in the lead role for several specific actions in the plan. One key action involves Federal strategies that provide a framework for state nutrient strategies. EPA's role in this action will include identification of key strategies and coordination of existing EPA efforts. These strategies may include TMDL, nutrient criteria, and standards development, as well as point source, wetlands, and air deposition activities that are aligned with the need to reduce the size of the Gulf Dead Zone. EPA staff leads the Gulf Hypoxia Task Force Communications Sub-Committee and in FY 2009 will continue to develop Annual Operating Plans and Annual Reports that track progress and increase awareness about Gulf of Mexico hypoxia-related progress and barriers along with other stakeholder outreach and education efforts. Other critical activities requiring ongoing EPA leadership and coordination include: providing support for the sub-basin teams, coordination of Mississippi River-Atchafalaya River Basin monitoring activities, and enhanced research and modeling to identify the highest opportunity watersheds for nutrient reductions.

- *Financing Coastal Protection and Restoration:* Successful coastal management requires secure finances. The year-to-year unpredictability of grant funding, increased pressures on coastal natural resources from growing populations, and the need to develop sustainable solutions to coastal environmental challenges require development of new funding strategies for coastal watersheds. New strategies include a blend of public and private funding sources. Development of long-term finance plans and effective partnerships, and promoting community support are also key to successful funding of coastal watershed protection and restoration efforts. EPA will provide coastal resource managers with practical financing strategies, training, and tools to build the capacity of coastal watershed organizations nationwide to secure sustainable funding. EPA will provide information about accessing the Agency's watershed funding portal and using its web-based resources, including a prioritization tool, step-by-step finance planning module, and funding databases.

- *Smart Growth*: EPA will continue to assist local land-use decision-makers by providing information necessary to plan for growth, minimize the adverse impacts of development, and promote innovative green infrastructure practices that enhance protection of coastal communities' water quality and living resources. The Agency also will address the cumulative environmental impacts of growth in coastal watersheds through application of smart growth techniques.

- *Climate-Ready Estuaries:* Partnering with EPA's Air and Radiation program, Climate Change Division, the program will build the capacity of NEPs and other coastal watershed entities to lead coastal communities' adaptation to the impacts of climate change. EPA will modify the successful National Park Service model, "Climate-Friendly Parks," by working with the NEPs to develop and implement "Climate-Ready Estuaries" models. The primary focus will be on adaptation of coasts to climate change, as well as actions to reduce greenhouse gas emissions. The national program will designate NEPs and other coastal communities as "climate ready," allowing coastal leaders to implement climate adaptation strategies within their communities and market their needs and actions to public and private interests.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Program dollars per acre of habitat protected or restored.	482	505	500	500	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Acres protected or restored in NEP study areas.	102,463	50,000	50,000	75,000	Acres

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-5.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These reductions will not impede Agency efforts to maximize efficiency and effectiveness in carrying out its programs.

- (-$371.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-$80.0) This decision consolidates Agency program evaluation efforts.

- (-$9,089.0) This total is the net of the 1.56% rescission and a reduction of congressionally directed increases in the FY 2008 Omnibus for CWA Section 320 grants.

Statutory Authority:

1990 Great Lakes Critical Programs Act; 2002 Great Lakes and Lake Champlain Act; CWA; Estuaries and Clean Waters Act of 2000; Protection, and Restoration Act of 1990; North American Wetlands Conservation Act; Water Resources Development Act (WRDA); 1909 The Boundary Waters Treaty; 1978 Great Lakes Water Quality Agreement (GLWQA); 1987 Great Lakes Water Quality Agreement; 1987 Montreal Protocol on Ozone Depleting Substances; 1996 Habitat Agenda; 1997 Canada-U.S. Great Lakes Bi-national Toxics Strategy; Coastal Wetlands Planning; U.S.-Canada Agreements.

Wetlands

Program Area: Water: Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$19,641.9***	***$21,518.0***	***$21,248.0***	***$22,223.0***	***$975.0***
Total Budget Authority / Obligations	$19,641.9	$21,518.0	$21,248.0	$22,223.0	$975.0
Total Workyears	144.4	147.0	147.0	147.0	0.0

Program Project Description:

Wetlands improve water quality; recharge water supplies; reduce flood risks; provide fish and wildlife habitat; offer sites for research and education; and support valuable fishing and shellfish industries. EPA's Wetlands Protection Program relies on partnerships with other programs within EPA; other Federal agencies; state, Tribal, and local governments; private landowners; and the general public to improve protection of our nation's valuable wetland resources. Working with our partners, EPA ensures a sound and consistent approach to wetlands protection.

Major activities of the Wetlands Protection Program include administration of EPA's role in the Clean Water Act (CWA) Section 404 Wetlands Regulatory Program; development and dissemination of rules, guidance, informational materials, and scientific tools to improve management and public understanding of wetland programs and legal requirements; and managing financial assistance to states and tribes to support development of strong wetland protection programs. EPA works with other Federal agencies to implement the provisions of Section 404 of the CWA to protect wetlands, free-flowing streams, and shallow waters. EPA also works in partnership with non-governmental organizations and state, Tribal, and local agencies to conserve and restore wetlands and associated river corridors through watershed planning approaches, voluntary and incentive-based programs, improved scientific methods, information and education, and building the capacity of state and local programs.

(See http://www.epa.gov/owow/wetlands/ for more information.)

FY 2009 Activities and Performance Plan:

The Administration has demonstrated its commitment to a regulatory program aimed at no net loss of wetlands and voluntary programs to increase wetland acreage. Approaches include public, private, regulatory, and non-regulatory initiatives and partnerships to restore, improve, and protect the nation's wetlands. In his 2004 Earth Day address, the President announced a renewed effort to move beyond a policy of no net loss to achieve an overall increase in the nation's wetland resources over the next five years. To achieve this goal, the Administration will

work through six Federal agencies to restore, improve, and protect at least three million acres of wetlands by 2009.

In FY 2009, EPA will work with its state and Tribal partners to develop and implement broad-based and integrated monitoring and assessment programs that improve data for decision-making on wetlands within watersheds, address significant stressors, and report on condition as well as geo-locating wetlands on the landscape. EPA will work to achieve national gains in wetland acreage by implementing an innovative partner-based wetland and stream corridor restoration program. The Agency, working with the Army Corps of Engineers and other partners, will implement the joint Corps-EPA Compensatory Mitigation Rule (slated to be finalized in FY 2008) and build our capacity to measure wetland condition, in addition to measuring wetland acreage. EPA's support will help avoid or minimize wetland losses, and provide for full compensation for unavoidable losses of wetland functions, through wetlands restoration and enhancement using a watershed approach and tools such as mitigation banking. EPA will continue to focus on wetland and stream corridor restoration to regain lost aquatic resources, and strengthening state and Tribal wetland programs to protect vulnerable wetland resources. EPA will continue to administer Wetland Program Development Grants, with a continued focus in FY 2009 on state/Tribal wetlands environmental outcomes.

Two key activities in 2009 will be implementing the 2006 decision of the Supreme Court in the *Rapanos* and *Carabell* cases, and working with our Federal agency partners to accelerate the completion of the digital Wetlands Data Layer in the National Spatial Data Inventory (NSDI), or national map.

The decision in *Rapanos* resulted in an increased demand on EPA and the Corps of Engineers for case-by-case decisions on whether specific streams and wetlands are within the scope of jurisdiction under the CWA. These thousands of case by case decisions will create an increase in the amount of training needed for EPA and Corps field staff. These case by case determinations will also increase the frequency of interagency analysis and coordination, including site visits. The June 2007 interagency guidance established the agencies' interpretation of the *Rapanos* decision and articulated how the decision would be implemented; making it clear that many new site-specific jurisdictional determinations would now be required.

The Wetlands Data Layer is one of 34 layers of digital data that comprise the NSDI. The U.S. Fish and Wildlife Service (FWS) has responsibility for maintaining the Wetlands Data Layer and EPA works closely with the Service's National Wetlands Inventory to help ensure the map is updated and maintained. In 2009, EPA will continue to work closely with the FWS and seven other partner agencies (including the Corps of Engineers and Federal Highways Administration) to accelerate the completion of the Wetlands Data Layer. This is essential for local, state, Tribal, regional and national agencies so they can better manage and conserve wetlands in the face of challenges imposed by climate change, including sea level rise and related issues of flooding and drought. The Wetlands Data Layer is the primary source of coastal wetlands data for EPA's sea level rise model. The sea level rise model, also known as SLAMM (Sea Level Affecting Marshes Model), is the primary model used to predict sea level rise and is used by a number of Federal agencies. SLAMM simulates the dominant processes involved in wetland conversions and shoreline modifications during long-term sea level rise. Increasing the accuracy and

completeness of the Wetlands Data Layer is important to the overall effectiveness of SLAMM and directly affects the accuracy of Federal sea level rise projections.

Two recent reports document progress in reducing wetland loss and increasing wetland restoration in the U.S. The 2006 National Wetlands Inventory Status and Trends Report, which reports the quantity and type of wetlands in the conterminous United States, shows that overall gains in wetland acres exceeded overall losses from 1998 through 2004 at a rate of 32,000 acres per year. This gain is primarily attributable to an increase in unvegetated freshwater ponds, which may have varying functional value. Additionally, wetland data provided in a report titled *Conserving America's Wetlands 2007: Three years of Progress Implementing the President's Goal* (Council on Environmental Quality, April 2007), indicates that 2,769,000 acres of wetlands have been restored, protected or improved since April 2004.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Working with partners, achieve a net increase of acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland conditions. (cumulative)	Data Lag	100,000	100,000	100,000	Acres/year

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	In partnership with the U.S. Army Corps of Engineers, states, and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory program	Data Lag	No Net Loss	No Net Loss	No Net Loss	Acres

This program has not been reviewed under the PART process.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$708.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$267.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

1990 Great Lakes Critical Programs Act; Great Lakes and Lake Champlain Act; CWA; 2002 Coastal Wetlands Planning, Protection, and Restoration Act of 1990; Estuaries and Clean Waters Act of 2000; North American Wetlands Conservation Act; WRDA; 1909 The Boundary Waters Treaty; 1978 GLWQA; 1987 GLWQA; 1996 Habitat Agenda; 1997 Canada-U.S. Great Lakes Bi-national Toxics Strategy; U.S.-Canada Agreements.

Program Area: Water: Human Health Protection

Beach / Fish Programs
Program Area: Water: Human Health Protection
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$2,821.4***	***$2,830.0***	***$2,789.0***	***$2,795.0***	***$6.0***
Total Budget Authority / Obligations	$2,821.4	$2,830.0	$2,789.0	$2,795.0	$6.0
Total Workyears	7.9	7.7	7.7	7.7	0.0

Program Project Description:

This program supports the Agency's efforts to protect people from contaminated recreational waters and contaminated fish and shellfish. Recreational waters, especially beaches in coastal areas and the Great Lakes, provide recreational opportunities for millions of Americans. However, swimming in some recreational waters, or eating locally caught fish or shellfish, can pose a risk of illness as a result of exposure to microbial pathogens or other pollutants.

Beaches Program

The Beaches Program protects human health by reducing exposure to contaminated recreational waters. Agency activities include: 1) issuing guidance to improve beach monitoring and public notification programs, including effective strategies to communicate public health risks to the public; 2) developing and disseminating sound scientific risk assessment methods and criteria for use in evaluating recreational water quality, prioritizing beach waters for monitoring, and warning beach users of health risks or closure of beaches; 3) promulgating Federal water quality standards where a state or tribe fails to adopt appropriate standards to protect coastal and Great Lakes recreational waters; and 4) providing publicly accessible Internet-based information about local beach conditions and closures.

(See http://www.epa.gov/waterscience/ for more information.)

Fish & Shellfish Programs

The Fish and Shellfish Programs provide sound science, guidance, technical assistance, and nationwide information to state, Tribal, and Federal agencies on the human health risks associated with eating locally caught fish/shellfish with excessive levels of contaminants. The Agency pursues the following activities to support this program: 1) publishing criteria guidance that states and tribes can use to adopt health-based water quality standards, assess their waters, and establish permit limits; 2) developing and disseminating sound scientific risk assessment methodologies and guidance that states and tribes can use to sample, analyze, and assess fish tissue in support of waterbody-specific or regional consumption advisories, or to determine that

no consumption advice is necessary; 3) developing and disseminating guidance that states and tribes can use to communicate the risks of consuming chemically contaminated fish; and 4) gathering, analyzing, and disseminating information to the public and health professionals that enable informed decisions on when and where to fish, and how to prepare fish caught for recreation and subsistence.

Mercury contamination in fish and shellfish is a special concern, and EPA and the Food and Drug Administration (FDA) have issued a joint advisory concerning eating fish and shellfish. Mercury contamination of fish and shellfish occurs locally, as well as in ocean-caught fish, and at higher levels causes adverse health effects, especially in children and infants.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will:

Beaches Program:

- Work with states and tribes to implement the latest, scientifically defensible pathogen criteria for freshwaters.

- Continue to work with coastal and Great Lakes states, territories, and tribes to adopt water quality standards that are as protective of human health as EPA's most current water quality criteria for pathogens.

Fish/Shellfish Programs:

- Continue to work with FDA and public health agencies to develop and distribute outreach materials related to the joint guidance issued by EPA and FDA for mercury in fish and shellfish and assess the public's understanding of the guidance.

- Continue to work with FDA to investigate the extent and risks of contaminants in fish, including the potential need for advisories for other pollutants, and to distribute outreach materials.

- Continue to provide technical support to states in the operation of their monitoring programs and on acceptable levels of contaminant concentrations, and in states' development and management of fish advisories.

- Continue to release the summary of information on locally issued fish advisories and safe-eating guidelines. This information is provided to EPA annually by states and tribes.

- Continue to reduce total blood mercury concentrations through ongoing work with FDA on joint guidance issued to the public, and by encouraging and supporting the states' implementation of their fish advisory programs through such measures as the National Forum on Contaminants in Fish and publishing the National Listing of Fish Advisories.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of women of childbearing age having mercury levels in blood above the level of concern.			5.5	5.2	Percent of Women

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of state-monitored shellfish-growing acres impacted by anthropogenic sources that are approved or conditionally approved for use.			65-85	65-85	Percent of Areas

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of waterborne disease outbreaks attributable to swimming in or other recreational contact with coastal and Great Lakes waters measured as a 5-year average.			2	2	Number of Outbreaks

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of days of beach season that coastal and Great Lakes beaches monitored by State beach safety programs are open and safe for swimming.	95.2	92.6	92.6	93	Percent of Days/Season

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$80.0) This reflects a consolidation of Agency program evaluation efforts.
- (+$30.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$56.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CWA; BEACH Act of 2000.

Drinking Water Programs
Program Area: Water: Human Health Protection
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$100,323.2***	***$96,967.0***	***$96,722.0***	***$99,476.0***	***$2,754.0***
Science & Technology	$3,256.6	$3,416.0	$3,375.0	$3,559.0	$184.0
Total Budget Authority / Obligations	$103,579.8	$100,383.0	$100,097.0	$103,035.0	$2,938.0
Total Workyears	564.7	584.1	584.1	583.4	-0.7

Program Project Description:

EPA's Drinking Water program is based on the multiple-barrier approach to protecting public health from unsafe drinking water. Under this approach, EPA protects public health through: source water assessment and protection programs; promulgation of new or revised, scientifically sound and risk-based National Primary Drinking Water Regulations (NPDWRs); training, technical assistance, and financial assistance programs to enhance public water systems' capacity to comply with existing and new regulations; and the national implementation of NPDWRs by state and tribal drinking water programs through regulatory, non-regulatory, and voluntary programs and policies to ensure safe drinking water.

(See http://www.epa.gov/safewater/ for more information.)

FY 2009 Activities and Performance Plan:

Safe drinking water and clean surface waters are critical to protecting human health. More than 280 million Americans rely on the safety of tap water provided by public water systems that are subject to national drinking water standards.[76] In FY 2009, EPA will continue to protect sources of drinking water from contamination; develop new and revise existing drinking water standards; support states, tribes, and water systems in implementing standards; and promote sustainable management of drinking water infrastructure. As a result of these efforts, the Agency will ensure that 90 percent of the population served by community water systems will receive drinking water that meets all applicable health-based standards.

Drinking Water Implementation

In FY 2009, the Agency will continue implementing requirements for the newly promulgated Cryptosporidium (Long Term 2 Enhanced Surface Water Treatment Rule or "LT2"),

[76] U.S. Environmental Protection Agency Safe Drinking Water Information System (SDWIS/FED), http://www.epa.gov/safewater/data/getdata.html.

Disinfection (Stage 2 Disinfectants and Disinfection Byproducts Rule or "Stage 2"), and Ground Water rules. EPA will work with states as they begin to apply for primacy for the LT2, Stage 2, and Ground Water rules in FY 2009. EPA also will assist states in implementing public health requirements for high-priority drinking water contaminants, including those covered under the Arsenic Rule and revised Lead and Copper Rule. By FY 2009, all water systems should be in compliance or on schedules to install treatment or develop alternative solutions to reduce their arsenic levels below the new standard. EPA will assist small water systems in choosing cost effective treatment technologies by maintaining and enhancing its Arsenic Virtual Trade Show website, through continuing its Arsenic Treatment Demonstration Program, and by coordinating with technical assistance providers. EPA also will continue collaborating with our state partners and other Federal agencies to assist these small water systems in finalizing and funding their arsenic reduction efforts.

In order to facilitate compliance with these new rules, as well as existing rules, EPA will:

- Carry out the drinking water program where EPA has primacy (*e.g.*, Wyoming, the District of Columbia, and tribal lands), and where states have not yet adopted new regulations.

- Continue to provide guidance, training (including webcasts), and technical assistance to states, tribes, laboratories and utilities on the implementation of drinking water regulations, especially the Ground Water Rule and revised Lead and Copper Rule. EPA will promote operation and maintenance best practices to small systems in support of long term compliance success with existing regulations.

- Support states with technical reviews of public water system submissions required for the Stage 2 rule in 2009. EPA will work directly with approximately 30,000 systems by reviewing monitoring submissions and conducting training in states that are not conducting early implementation of the LT2/Stage 2 rules (over 59,000 systems will need to comply with the rules during FY 2009).

- Support states in their efforts to provide technical, managerial, and financial assistance to small systems to improve their capacity to consistently meet regulatory requirements through the use of cost-effective treatment technologies, proper disposal of treatment residuals, and compliance with contaminant requirements, including monitoring under the arsenic and radionuclides rules and rules controlling microbial pathogens and disinfection byproducts.

- Improve the quality of data in the Safe Drinking Water Information System (SDWIS) by continuing to work with states to improve data completeness, accuracy, timeliness, and consistency through: training on data entry, error correction, and regulatory reporting; conducting data verifications and analyses; and implementing quality assurance and quality control procedures. Also, the Agency will support a database for the Underground Injection Control (UIC) program. Specifically, EPA will deploy and implement the UIC database through orientation and training of users and leveraging opportunities to reach users through their national association.

- Continue on-going oversight programs for categorical grants (Public Water System Supervision (PWSS), Drinking Water State Revolving Fund (DWSRF), and UIC).

Drinking Water Standards

In FY 2009, the Agency will continue to collect and evaluate information on potential drinking water contaminants and their health risks as included on the third Contaminant Candidate List (CCL3). Potential contaminants may include pharmaceuticals and personal care products. The Agency will use this information to make risk management decisions based upon sound science to address public health threats posed by these contaminants. The Agency will also continue to evaluate and address drinking water risks though activities to implement the Safe Drinking Water Act (SDWA) including:

- Reviewing and evaluating comments and information submitted in response to publications of the draft third Contaminant Candidate List (CCL3) identifying drinking water contaminants which may require regulation.

- Collecting, compiling and analyzing data on the frequency and level of occurrence of 25 unregulated contaminants in public water systems through implementation of the second Unregulated Contaminant Monitoring Rule.

- Developing analytical methods that can be utilized by laboratories across the U.S. to test for the presence of new and emerging contaminants in drinking water.

- Collaborating with the Centers for Disease Control and Prevention to determine public health protection effects of risk management strategies for drinking water contamination, including waterborne disease.

- Evaluating new information on health effects, occurrence, and other information for regulated contaminants to determine what if any revisions are appropriate under the National Primary Drinking Water Rule Review completed every six years.

- Developing proposed revisions to the Total Coliform Rule and considering data and research needs for water distribution systems, based on recommendations from the Total Coliform Rule/Distribution Systems Federal Advisory Committee to maintain or provide for greater public health protection.

- Implementing the appropriate actions to address the long term issues identified in the national review of the revised Lead and Copper Rule. Long term issues that could be addressed include the effectiveness of partial lead service line replacement and effectiveness of lead and copper sampling requirements.

Sustainable Infrastructure

EPA's sustainable infrastructure initiative, an Agency priority, is based on four pillars – better management, full-cost pricing, water efficiency and the watershed approach. EPA's DWSRF provides states with funds for low-interest loans to assist utilities with financing drinking water infrastructure needs. In FY 2009, EPA will work with states to encourage targeting this affordable, flexible financial assistance to support utility compliance with safe drinking water standards and also will work with utilities to promote full-cost pricing as a critical means to meet infrastructure needs and ensure compliance. The Agency continues to implement a multi-faceted DWSRF management strategy to ensure effective oversight of these funds and optimization of program outcomes.

In 2005, EPA released the third Drinking Water Needs Survey to Congress, based on data collected from utilities in 2003. In 2009, the Agency plans to release the next report, based on data collected from utilities in 2007. The survey documents 20-year capital investment needs of public water systems that are eligible to receive DWSRF monies – approximately 54,000 community water systems and 21,400 not-for-profit non-community water systems. The survey reports infrastructure needs that are required to protect public health, such as projects to ensure compliance with the Safe Drinking Water Act (SDWA). As directed by the SDWA, EPA uses the results of the survey to allocate DWSRF funds to the states and tribes.

EPA will further contribute to the sustainable infrastructure initiative through partnership-building activities, including the Agency's capacity development and operator certification work with states, and efforts with leaders in the drinking water utility industry to promote asset management and the use of watershed-based approaches to manage water resources. The Agency also will engage states and other stakeholders to facilitate the voluntary adoption of best practices by drinking water utilities.

Source Water Protection

EPA will continue supporting state and local efforts to identify and address current and potential sources of drinking water contamination. These efforts are integral to the sustainable infrastructure leadership initiative because source water protection can reduce the need for expensive drinking water treatment, along with related increased energy use and costs, which, in turn, can reduce the cost of infrastructure.

In FY 2009, the Agency will:

- Continue to work across EPA and with other Federal agencies to increase awareness of source water protection for better management of significant sources of contamination by providing training, technical assistance, and technology transfer capabilities to states and localities.

- Continue to work with national, state, and local stakeholder organizations and the multi-partner Source Water Collaborative to encourage broad-based efforts directed at

encouraging actions at the state and local level to address sources of contamination identified in source water assessments.

- Continue to support source water protection efforts by providing training, technical assistance, and technology transfer capabilities to states and localities, and facilitating the adoption of Geographic Information System (GIS) databases to support local decision-making.

- Direct national Underground Injection Control (UIC) program efforts to protect underground sources of drinking water by establishing priorities, developing guidance, measuring program results, and administering the UIC Grants.

- Expand energy permitting work to keep pace with the nation's burgeoning energy exploration and development; by FY 2009, U.S. energy production is expected to grow by almost 10% from FY 2005 levels. This includes an increase of 5.0 FTE for energy permitting.

- Manage the regulation of potential new waste streams that will use underground injection, including residual waste from desalination and other drinking water treatment processes.

- Work in concert with the EPA Office of Air and Radiation, the Department of Energy, and other Federal Agencies as necessary to ensure that wells injecting carbon dioxide do not endanger underground sources of drinking water.

- Carry out responsibilities in permitting current and future geologic sequestration (GS) of carbon dioxide projects. FY 2009 funding for carbon sequestration work is $2.6 million. Activities planned for FY 2009 include:

    - Continue development of national rules for the geologic sequestration (GS) of carbon dioxide recovered from emissions of power plants and other facilities.
    - Analyze data collected through Department of Energy pilot projects and industry efforts to demonstrate and commercialize geologic sequestration of carbon dioxide technology;
    - Engage states and stakeholders through meetings, workshops and other avenues, as appropriate;
    - Provide technical assistance to states in permitting initial GS projects; and
    - Work with the Office of Research and Development to understand key issues and knowledge gaps. There are many complex technical questions that must be answered in order to develop an appropriate regulatory framework that is fully protective of human health and the environment, and ensures that underground sources of drinking water are not placed at risk.

The Drinking Water Protection Program completed a PART review in 2006 and achieved an "adequate" rating. The measures and targets below were modified through the PART process in FY 2008. The PART's improvement plan requires that EPA continue to work towards

developing a long-term outcome performance measure to assess the public health impacts of improvements in drinking water compliance, continue to improve the overall quality of the data in EPA's drinking water compliance reporting system, and revise the current drinking water small system affordability methodology to address negative distributional impacts.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.)	92	95	95	95	Percent CWS

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards.	96.8	N/A	95	95	Percent CWS

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	91.5	94	90	90	Percent Population

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of the population in Indian country served by	87	87	87	87	Percent Population

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	community water systems that receive drinking water that meets all applicable health-based drinking water standards					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89	89	89.5	90	Percent Systems

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+5.0 FTE / -5.0 FTE / +$1,600.0) This reflects a redirection of program FTE to energy-related permitting work in support of the Agency's priority on clean and affordable energy. Additional funds will support carbon sequestration rule development work and increased energy permitting.

- (-0.7 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities. This reduction will not impede Agency efforts to maximize deficiency and effectiveness in carrying out its programs.

- (+$2,629.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$1,843.0) This decrease reflects completion of some EPA efforts, such as early implementation of LT2/Stage 2, major SDWIS training activities, and efforts on analytic method development.

- (+$368.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SDWA; CWA.

Program Area: Water Quality Protection

Marine Pollution
Program Area: Water Quality Protection
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$12,890.5***	***$12,851.0***	***$12,674.0***	***$13,185.0***	***$511.0***
Total Budget Authority / Obligations	$12,890.5	$12,851.0	$12,674.0	$13,185.0	$511.0
Total Workyears	43.7	43.7	43.7	44.1	0.4

Program Project Description:

The goals of the marine pollution programs are to ensure marine ecosystem protection by controlling point-source and vessel discharges; managing dredged material and ocean dumping; developing regional and international collaborations; monitoring ocean and coastal waters; and managing other sources of pollution, such as marine debris and invasive species.

Major areas of effort include:

- Developing and implementing regulations and technical guidance to control pollutants from vessels, and issuing permits for materials to be dumped in ocean waters.

- Designating, monitoring, and managing ocean dumping sites and implementing provisions of the National Dredging Policy.

- Operating the Ocean Survey Vessel (OSV) Bold to monitor coastal and ocean waters, including supporting ocean disposal site management and conducting baseline and trends assessments (*e.g.*, Gulf of Mexico hypoxic zone, climate change indicators, ocean dumping sites, and coral reefs).

- Supporting international marine pollution control with other Federal agencies through negotiations of international standards that address aquatic invasive species, harmful antifoulants, bilge water, and marine debris.

- Working with a wide variety of stakeholders to develop, provide, and implement watershed management tools, strategies and plans for coastal ecosystems in order to restore and maintain the health of coastal aquatic communities on a priority basis, including dredged material management plans for coastal ports.

(See http://www.epa.gov/owow/oceans/regulatory/index.html for more information.)

FY 2009 Activities and Performance Plan:

Coastal and ocean waters are environmentally and economically valuable to the nation. To protect and improve water quality on a watershed basis, EPA will work with states, tribes, interstate agencies, and others on improving the quality of our valuable ocean resources. The health of ocean and coastal waters and progress in meeting the strategic targets will be tracked through periodic issuance of National Coastal Condition reports, a cooperative project with other Federal agencies. Key FY 2009 actions include:

Reducing Vessel Discharges

- Continue to work with the Department of Defense to finalize discharge standards for Armed Forces vessels (*i.e.*, complete development for the first phase of the project and continue development of standards for remaining discharges).

- Continue to participate in the review of clean-up plans for individual Navy and Maritime Administration vessel-to-reef projects.

- Continue assessing program success in reducing sewage discharges from vessels and enhance controls of pollutant discharges from vessels.

- Continue to coordinate with the U.S. Coast Guard (USCG) on ballast water discharge standards.

- Participate on the Marine Environment Protection Committee (MEPC) of MARPOL (The Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships, 1973) to develop international standards and guidance within the MARPOL Convention.

Managing the Marine Protection, Research, and Sanctuaries Act (MPRSA) / Ocean Dumping Program (including Dredged Material)

- Monitor active dredged material ocean dump sites to ensure achievement of environmentally acceptable conditions, as reflected in Site Management Plans.

- As co-chair of the National Dredging Team, in conjunction with the Army Corps of Engineers and EPA Regional Offices, continue working to create a tracking system for beneficial use of dredged materials (as an alternative to dumping in ocean or coastal waters).

- Work with other interested agencies and the international community to develop guidance on sub-seabed carbon sequestration, and address any requests for carbon sequestration in the sub-seabed or by iron fertilization of the ocean, including any required permitting under MPRSA.

- Continue working to ensure that U.S. policy and procedures regarding ocean dumping are consistent with the London Convention of 1972 and its 1996 Protocol. Continue managing the ocean dumping vessels database which is used for determining compliance with a general permit under MPRSA for ocean dumping of vessels in the United States.

Monitoring and Assessment

- During 2009, the *OSV Bold* is expected to continue supporting the following types of activities: collection of environmental data from several offshore areas for use in their designation of dredged material disposal sites (such as in Long Island Sound); periodic environmental monitoring of 10 to 20 of the 64 active ocean disposal sites; the monitoring of 5 to 10 offshore waste disposal sites or wastewater outfalls; and monitoring of significantly impacted or important coastal waters such as the Gulf of Mexico hypoxic zone and Florida coral reefs.

- The Agency will use the *OSV Bold* to stay abreast of climate change science by working with the Regional Offices and other EPA program offices to identify and develop basic climate change indicators through the *OSV Bold's* monitoring activities.

Reducing Marine Debris

- Work with other members of the Interagency Marine Debris Coordinating Committee (IMDCC) to implement an action plan for assessing and reducing marine debris in response to the forthcoming IMDCC Report to Congress.

Contributing to the Health of Coral Reefs

- Continue participation on the U.S. Coral Reef Task Force in order to address new issues and problems arising with coral reefs and to expand efforts to reduce stresses on reefs from rising water temperatures and vessel discharges.

Ocean Action Plan

- The Administration developed the "U.S. Ocean Action Plan" to identify immediate, short-term actions that will provide direction for ocean policy and outline additional long-term actions for the future. EPA will continue to be an active participant in the Ocean Action Plan, using this interagency process to make progress in addressing various issues, including climate change, regional collaborations, and vessel discharges.

This program was included in OMB's PART assessment, Ocean, Coastal, and Estuary Protection, completed in 2005, and was rated "adequate." As a follow-up action to the PART review, and to improve the performance of the Marine Pollution Program, a new strategic plan measure was developed for the ocean dumping program for FY 2008. On an annual basis, EPA Regional Offices will determine whether dredged material ocean dump sites are achieving environmentally acceptable conditions, as defined by each individual Site Management Plan.

Should a site not achieve acceptable conditions, corrective actions will be taken by the appropriate parties.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan).			95	95	Percent Sites

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+0.4 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.
- (+$222.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$289.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Certain Alaskan Cruise Ship Operations Act (PL 106-554); Clean Vessel Act; CWA; CZARA of 1990; FIFRA; MPPRCA of 1987; MPRSA; National Defense Authorization Act for Fiscal Year 2004, Section 3516; NEPA, Section 102; NISA of 1996; NAFTA; Ocean Dumping Ban Act of 1988; OAPCA; PPA; RCRA; SDWA; Shore Protection Act of 1988; TSCA; WRDA; Wet Weather Water Quality Act of 2000.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	***$191,797.2***	***$196,092.0***	***$193,546.0***	***$198,706.0***	***$5,160.0***
Total Budget Authority / Obligations	$191,797.2	$196,092.0	$193,546.0	$198,706.0	$5,160.0
Total Workyears	1,085.6	1,101.1	1,101.1	1,092.4	-8.7

Program Project Description:

The EPA Surface Water Protection Program, under the Clean Water Act (CWA), directly supports efforts to protect, improve and restore the quality of rivers, lakes, and streams. EPA works with states to make continued progress toward the clean water goals identified in EPA's Strategic Plan by implementing core clean water programs, including innovations that apply programs on a watershed basis, and accelerating efforts to improve water quality on a watershed basis.

FY 2009 Activities and Performance Plan:

In 2009, EPA will focus its work with states, interstate agencies, tribes and others in key areas of the national water program, including: water quality standards and technology ($45 million), National Pollutant Discharge Elimination System (NPDES) ($41 million), water monitoring ($23 million, including $5 million for the monitoring initiative), Total Maximum Daily Loads (TMDLs) ($28 million), watershed and nonpoint source management ($26 million), sustainable infrastructure management ($16 million), water infrastructure grants management ($14 million), and CWA Section 106 program management ($7 million).

Water quality criteria and standards provide the scientific and regulatory foundation for water quality protection programs under the CWA. They are used to define which waters are clean and which waters are impaired, and thereby serve as benchmarks for decisions about allowable pollutant loadings into waterways. (See http://www.epa.gov/waterscience/ for more information.)

In FY 2009, EPA will continue to support state and Tribal programs by providing scientific water quality criteria information, which will include conducting scientific studies and developing or improving criteria for nutrients and pathogens in ambient water. EPA will work with state and Tribal partners to help them develop standards that are "approvable" under the CWA, including providing advance guidance and technical assistance where appropriate before the standards are formally submitted to EPA. EPA expects that 83 percent of state submissions will be approvable in FY 2009.

In FY 2009, EPA will continue the monitoring initiative that began in 2005. EPA will provide technical support to states, tribes, and other partners participating in national and state statistically valid surveys. A report on baseline conditions in lakes will be issued in 2009. EPA also will be analyzing samples for a statistically-valid survey of baseline conditions in rivers and a second survey of wadeable streams to determine trends in stream conditions. A report on trends in streams and baseline condition of rivers will be issued in 2011. EPA will support states, tribes and other partners in the design and collection of data for a fourth survey of coastal water conditions. EPA will support states and tribes in implementing their comprehensive monitoring strategies, including development of efficient scientifically valid tools to assist in monitoring and assessing their waters, and in implementing statistically-valid surveys of water condition at the state-scale. These efforts will help provide the data and information needed for sound management of the nation's waters.

In FY 2009, EPA will continue working with states, interstate agencies, and tribes to foster a "watershed approach" as the guiding principle of clean water programs. In watersheds where water quality standards are not attained, states will be developing TMDLs, which are critical tools for meeting water restoration goals. Watershed plans and TMDLs will focus control and restoration efforts on pollutants from point sources and runoff from nonpoint sources. States and EPA have made significant progress in the development and approval of TMDLs (cumulatively almost 27,000 total TMDLs completed through FY 2007 by states and EPA) and expect to develop over 3,000 TMDLs in FY 2009.

Protection of water quality on a watershed basis requires a careful assessment of the nature and sources of pollution; their location and setting within the watershed; their relative influence on water quality; and their amenability to preventive or control methods. In FY 2009, EPA will support efforts of states, tribes, other Federal agencies, and local communities to develop and implement watershed-based plans that successfully address all of these factors to enable impaired waters to be restored through the national nonpoint source program (Section 319). Nonpoint source management is the key to addressing most of the remaining water quality problems.

In FY 2009, EPA will provide program leadership and technical support by:

- Creating, supporting, and promoting technical tools that states need to accurately assess water quality problems and analyze and implement solutions.

- Implementing a new web-based tool to support watershed planning.

- Continue to enhance accountability for results through the use of a newly-released nonpoint source program tracking system which will continue to track all pollutant load reductions achieved by each project. The system also will allow EPA to better track waters fully restored by Section 319-funded projects by relating Section 319 project information to other data management systems.

- Focusing on the development and dissemination of new tools to promote Low Impact Development (LID), thereby preventing new nonpoint sources of pollution. LID is an

innovative, comprehensive land planning and engineering design approach with a goal of maintaining and enhancing the pre-development water quality and flow in urban and developing watersheds. (See http://www.epa.gov/owow/nps/lid/lidlit.html for more information.)

- Continuing coordination with the U.S. Department of Agriculture to ensure that Federal resources, including grants under Section 319 and Farm Bill funds, are managed in a coordinated way to maximize water quality improvement in impaired waters and protection in all others. Also, EPA will continue to work with the U.S. Forest Service to address water quality impairments by maintaining and restoring National Forest System watersheds.

In FY 2009, EPA will continue to implement and support the core water quality programs that control point source discharges. The NPDES program requires point source dischargers to be permitted and requires pretreatment programs to control discharges from industrial and other facilities to the nation's wastewater treatment plants. This program provides a management framework for the protection of the nation's waters through the control of billions of pounds of pollutants. In 2009, EPA will place an increased focus on energy related permitting. The work involves NPDES permit actions related to conventional oil and gas, coalbed methane, coal mining, ethanol, power plants, refineries, uranium, natural gas liquids, liquefied natural gas terminals, pipelines, and oil shale/tar sands. EPA will also focus on several other key strategic objectives for the NPDES and effluent guideline programs:

- Use the results of the "*Permitting for Environmental Results Strategy*" and regional program assessments and permit quality reviews to ensure the health of the NPDES program; continue to address workload concerns in permit issuance; focus limited resources on priority permits that have the greatest benefit for water quality; encourage trading and watershed-based permitting; and foster efficiency in permitting program operations through use of electronic and other streamlining tools. (See http://cfpub.epa.gov/npdes/per.cfm for more information.)

- Advance program innovations, such as implementing watershed permitting and trading, and the Green Infrastructure Strategy to reduce wet weather flows. Common green infrastructure approaches currently in use include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, vegetated median strips, reforestation, and protection and enhancement of riparian buffers and floodplains. EPA and other leading Green Infrastructure state, city, and private organizations recently signed an agreement to promote green infrastructure as a means to protect and improve water quality. EPA is implementing the Green Infrastructure Strategy in concert with the signatories and other interested organizations. EPA will implement a number of actions to address technical issues associated with and cost effectiveness of Green Infrastructure; continuously update the webpage on Green Infrastructure information, practice, tools, and case studies; issue a Municipal Handbook – a how to guide for local governments to implement Green Infrastructure approaches to stormwater management; double the number of model municipal separate storm sewer system (MS4) permits developed with "volunteer" states; complete the first round of Green Infrastructure Recognition Awards;

complete 5 demonstration projects for "green infrastructure" at big box centers through voluntary collaborations with the "large format retailers;" and complete development of a best practice guide for Green Infrastructure at Federal facilities in cooperation with other Federal agencies.

- Implement strategies to improve management of pretreatment programs. Strategies include implementation of pretreatment program results-based measures based on a pilot study evaluating 9 draft results-based measures, a draft Measures Implementation Handbook and widescale testing in 2008, to determine the viability of the measures and refine their description, source, and reporting factors; implementation of the strategy, "Oversight of SIUs Discharging to POTWs Without Approved Pretreatment Programs," issued on May 18, 2007; and pretreatment training provided for regions and states, including onsite and web-based and self-directed courses.

- Issue the annual plan that describes the CWA-mandated review of industrial categories to determine if new or revised effluent guidelines are warranted.

- Continue to develop effluent regulations for discharges from airport deicing facilities, construction and development activities, and drinking water treatment facilities.

- Develop revised rules for detection and quantitation of pollutants per the recommendations of a Federal Advisory Committee (FACA). Detection and quantitation procedures are used by regulatory authorities, dischargers, and labs to determine whether a pollutant is present and to measure the amount of the pollutant. The FACA committee's charge is to improve how detection and quantitation limits are calculated and used in CWA programs, such as how the procedures will be used for compliance or enforcement. The procedures are included in the Code of Federal Regulations so any change as a result of the Committee's recommendations will need to go through rulemaking. EPA could then use the revised procedures to set discharge limits, for permits, for enforcement, or for lab qualifications. In FY 2009, we will be working on the rulemaking to codify the new procedures.

New Concentrated Animal Feeding Operation (CAFO) rules were developed in 2003 and were finalized in 2008 in response to a 2nd Circuit Court ruling. EPA will work with states and tribes to implement the final rule to assure that, by February 27, 2009, all CAFOs that discharge are covered by an NPDES permit and that CAFOs have the tools and information needed to prevent discharges. In addition, EPA will monitor the number of facilities covered by stormwater and CAFO permits. EPA will work with NPDES authorities to ensure that 90 percent of all permits and 95 percent of priority permits are current.

EPA will continue to implement a Sustainable Infrastructure Strategy focused around four key principles or "pillars" – better management, water efficiency, full-cost pricing, and the watershed approach. The Agency continues to work with its partners to facilitate the voluntary adoption of best management practices in wastewater asset management, innovations, and efficiency. The long-term goal of these partnerships is focused on improving water quality and supporting sustainable wastewater utilities that are able to maximize the value of clean water infrastructure

support by improving system performance at the lowest possible cost. We will continue to implement activities as part of our partnership with six national water and wastewater associations to promote effective utility management centered on a series of *Attributes of Effectively Managed Utilities and Keys to Management Success,* based on the agreement signed in May 2007. As part of this initiative, we will work with the associations to develop a basic implementation guide for utilities and a set of targeted utility performance measures linked to the *Attributes* and promote their use with utilities.

Water use efforts include the water-efficiency market enhancement program, WaterSense, which gives consumers a reference tool to identify and select water-efficient products with the intent of reducing national water and wastewater infrastructure needs by reducing demands and flows, allowing for deferred or downsized capital projects. The Agency has issued voluntary specifications for four water-efficient service categories (certification programs for irrigation system auditors, designers, and installation and maintenance professionals) and two product categories (residential High-Efficiency Toilets or (HETs) and bathroom faucets). Products that are successfully tested by an independent laboratory to meet WaterSense specifications may bear the WaterSense label.

In less than two years, WaterSense has already become a national symbol for water efficiency among utilities, plumbing manufacturers, and consumers. Awareness of the WaterSense label is growing every day. More than 80 different models of high-efficiency toilets have earned the label, and WaterSense labeled faucets should be available in CY 2008. In addition to manufacturers, EPA will continue to work with utilities, retailers, distributors, and the media to educate consumers on the benefits of switching to water-efficient products.

EPA realizes that water-efficient products are just the start of a new wave of water conservation. We will continue to work with utilities to incorporate WaterSense promotion as part of their broader conservation efforts, which include behavioral changes as well. We will continue to ask our retail and distribution partners to stock WaterSense labeled products and make it easy for their customers to find water-saving options. We will employ articles, promotional material templates, and other cost-effective marketing tactics to educate consumers about the availability of WaterSense labeled products. By promoting this easily recognizable, consistent national brand, EPA hopes WaterSense will make water-efficient products the clear and preferred choice among consumers.

In FY 2009, the Agency will develop specifications based upon research done and decisions made in FY 2008 on the viability of specification development for additional product and service categories including showerheads, irrigation control technology, medical devices (*e.g.*, steam sterilizers), landscape management, and drip irrigation. EPA also will focus on developing, implementing, and promoting its new home program which provides benchmark criteria for water-efficient new homes and spurs water-efficiency in construction of new homes.

The Clean Water State Revolving Funds (CWSRFs) provide low interest loans to help finance wastewater treatment facilities and other water quality projects. Policy and oversight of the fund is supported by this program. In managing the CWSRF, EPA continues to work with states to meet several key objectives:

- Funding projects designed as part of an integrated watershed approach;
- Linking projects to environmental results through the use of water quality and public health data;
- Maintaining the excellent fiduciary condition of the funds; and
- Continuing to support states efforts in developing integrated priority lists to address nonpoint source pollution, and estuary protection and wastewater projects.

In FY 2009, EPA will submit the Clean Watersheds Needs Survey (CWNS) Report to Congress to OMB for review. The CWNS reports on needs for publicly-owned wastewater collection and treatment facilities, facilities for control of sanitary sewer overflows (SSOs), combined sewer overflows (CSOs), and other activities. The information is used to produce the Report to Congress and to support permitting, pollutant loadings scenarios, and other watershed-based management activities.

The Agency also will provide oversight and support for over 2,200 congressionally mandated projects related to water and wastewater infrastructure as well as management and oversight of grant programs, such as the Section 106 grants, the U.S-Mexico Border program and the Alaska Native Village program.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of high priority EPA and state NPDES permits that are reissued on schedule.	104	95	95	95	Percent Permits

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Loading (pounds) of pollutants removed per program dollar expended.	331	285	332	368	Lbs

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of waters assessed using statistically valid surveys.	54	54	65	65	Percent Waters

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of TMDLs that are established or approved by EPA on a schedule consistent with national policy (cumulative).	26,844	25,274	33,828	36,941	TMDLs

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA.	85.6	85	87	83	Percent Submissions

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative).	1,409	1,166	1,550	1,660	Number of Segments

The Surface Water Protection program underwent a PART evaluation in 2005, and was rated "moderately effective." This program is working on follow up actions to: (1) assess 100% of river, lakes, and streams; (2) develop water quality reports on statistically-valid surveys of wadeable streams; and (3) conduct permit quality reviews.

In August of 2007, EPA adopted a clarification to the TMDL counting methodology to more directly reflect the pollutants addressed in TMDLs. As a result of this counting methodology change, the cumulative fiscal year Surface Water Protection Actuals have been revised, resulting in a cumulative net reduction of 1,577 TMDLs. Actuals and targets for fiscal year 2007 and earlier were also adjusted consistent with this revised methodology.

Note: Because a TMDL is a plan for attaining water quality standards, the terms "approved" and "established" refer to the completion of the TMDL itself and not necessarily its implementation.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-11.7 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. The program has matured, resulting in a reduced need for Federal FTE resources due to the delegated nature of various program components and improvements in program management.

- (+3.0 FTE / +$800.0) This change reflects additional FTE and funds for NPDES Energy Permitting in support of the Agency's priority on clean and affordable energy.

- (+$4,412.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$190.0) This decision reflects consolidation of EPA's program evaluation efforts.

- (+$138.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CWA.

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APPROPRIATION: Inspector General
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Inspector General					
Budget Authority	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
Total Workyears	223.7	287.7	259.8	287.7	27.9

Program Projects in IG
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Audits, Evaluations, and Investigations					
Audits, Evaluations, and Investigations	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
Subtotal, Audits, Evaluations, and Investigations	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
TOTAL, EPA	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)

Program Area: Audits, Evaluations And Investigations

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Inspector General	***$32,288.4***	***$38,008.0***	***$41,099.0***	***$39,483.0***	***($1,616.0)***
Hazardous Substance Superfund	$12,286.2	$7,149.0	$11,486.0	$7,164.0	($4,322.0)
Total Budget Authority / Obligations	$44,574.6	$45,157.0	$52,585.0	$46,647.0	($5,938.0)
Total Workyears	307.5	331.8	331.8	331.8	0.0

Program Project Description:

EPA's Office of Inspector General (OIG) provides audit, evaluation, investigative, inspection, and public liaison services and products that fulfill the requirements of the Inspector General Act, as amended, by identifying fraud, waste, and abuse in Agency, grantee and contractor operations, and by promoting economy, efficiency, and effectiveness in the operations of the Agency's programs. OIG activities add value and enhance public trust by providing the Agency, the public, and Congress with independent analyses and recommendations that help resolve management challenges and identify best practices for safeguarding EPA resources and accomplishing EPA's environmental goals. OIG activities also prevent and detect fraud in EPA programs and operations, including financial fraud, lab fraud, and cyber crime. In addition, the EPA Inspector General serves as the IG for the U.S. Chemical Safety and Hazard Investigation Board.

FY 2009 Activities and Performance Plan:

The EPA OIG will assist the Agency in its efforts to reduce environmental and human health risks by helping to improve program operations, save taxpayer dollars, and resolve major management challenges. In FY 2009, the OIG will continue focusing on areas associated with risk, fraud, waste, and verification of data used to support actions and reported results. The OIG will identify high risk areas and opportunities to reduce administrative overhead, make recommendations to mitigate those risks, and improve operating efficiency leading to positive environmental impacts and the cost effective attainment of EPA's strategic goals. The OIG plans to examine issues related to research and development, enforcement, homeland security, workforce, project management, Program Assessment Rating Tool (PART) assessments, internal control implementation, data verification, EPA facilities, and policy/regulation review.

Audits

Audits will focus on whether: (1) assistance agreements and contracts are efficiently and effectively administered to accomplish the Agency's mission (emphasis will be on fraud detection and prevention); (2) risk and PART assessments are serving as controls for identifying and correcting weaknesses in Agency program operations; (3) accounts receivable are accurate, complete, and collected timely; (4) unliquidated obligations are valid; (5) interagency financial transactions are properly recorded and managed; and (6) information technology infrastructure, data network exchanges, and security meet statutory and regulatory requirements, and provide information necessary to manage the Agency effectively. In addition, a significant portion of audit resources will be devoted to mandated work assessing the financial statements of EPA as required by the Chief Financial Officers Act, the information security practices of EPA required by the Federal Information Security Management Act, and financial audits of costs claimed by recipients of EPA assistance agreements conducted pursuant to the Single Audit Act.

Evaluations

Evaluations will address major issues such as reliability of self-certified data used by EPA to measure its performance and report results, project management (are programs being managed for results), homeland security (how prepared is EPA to make decisions and respond to environmental threats), and follow-up on recommendations contained in previous OIG reports. Specific areas of evaluation will include: (1) PART reviews and risk assessments; (2) EPA program enforcement; (3) readiness (how ready are EPA program offices to meet their roles and responsibilities in emergency situations); (4) homeland security; (5) data verification (how reliable is the self-certified data EPA collects and uses); 6) research and development (how well has EPA implemented EPA and OMB peer review policies and requirements); (7) climate change (are claimed results and cost-benefit analyses accurate and complete); (8) rulemaking; and (9) wetlands (are EPA's efforts to review and enforce wetland permits adequate).

Investigations

The OIG will conduct investigations and seek prosecution of criminal activity and serious misconduct in EPA programs and operations that undermine Agency integrity and create imminent environmental risks. Investigations will focus on: (1) fraudulent activities in the awarding, performance, and payment of funds under EPA contracts, grants, and other assistance agreements to individuals, companies, and organizations; (2) criminal activity or serious misconduct affecting EPA programs or involving EPA personnel which could undermine or erode the public trust; (3) laboratory fraud relating to payments made by EPA for erroneous environmental testing data and results that could undermine the bases for EPA decision-making, regulatory compliance, and enforcement actions; (4) intrusions into and attacks against EPA's network, as well as incidents of computer misuse and theft of intellectual property; and (5) release of, or unauthorized access to or use of sensitive or proprietary information.

Public Liaison

Public liaison work will continue to address critical public and governmental concerns. This activity involves responding to requests from the public, Congress, EPA employees, or other government entities for information regarding and responses to complaints or allegations of fraud, waste, abuse, or mismanagement in EPA programs. To accomplish this work, the OIG initiates reviews and, if needed, contracts with subject matter experts to assist with such reviews. Public liaison issues reports and coordinates its efforts with ongoing audits, evaluations, or investigations.

Follow-up

To further promote economy, efficiency and effectiveness, the OIG will conduct follow-up reviews of Agency responsiveness to OIG recommendations to determine if appropriate actions have been taken and intended improvements have been achieved. This process will serve as a means for keeping EPA leadership apprised of accomplishments and needed corrective actions, and will facilitate greater accountability for results from OIG operations.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Environmental and business actions taken for improved performance or risk reduction.	464	318	334*	318	Actions

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	189	150	120*	120	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Environmental and business recommendations or risks identified for corrective action.	949	925	971*	903	Recommendations

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Criminal, civil, administrative, and fraud prevention actions.	103	80	80	80	Actions

* Note: Affected targets are subject to being revised upward based upon decisions for funding and oversight of work related to the Defense Contract Audit Agency.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands)

- (+$1,725.0) This is a reallocation of payroll resources to reflect FTE distribution between the Inspector General and Superfund Transfer appropriations, as well as an increase for payroll and cost of living for existing FTE.
- (-$3,992.0) This is a reduction of additional congressionally directed increases in the FY 2008 Omnibus.
- (+$651.0) This change reflects restoration of the 1.56% rescission to all program projects.
- (+27.9 FTE) This reflects a redistribution of FTE between the Inspector General and Superfund Transfer appropriations.

Statutory Authority:

Inspector General Act, as amended; Government Management Reform Act; Reports Consolidation Act; Single Audit Act; and Pesticides Registration Improvement Act; CFO Act; RCRA; FFMIA; FISMA; FQPA.

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APPROPRIATION: Building and Facilities
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Building and Facilities					
Budget Authority	$39,044.3	$34,801.0	$34,258.0	$35,001.0	$743.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Projects in B&F
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Homeland Security					
Homeland Security: Protection of EPA Personnel and Infrastructure	$10,372.2	$7,870.0	$7,747.0	$8,070.0	$323.0
Operations and Administration					
Facilities Infrastructure and Operations	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Subtotal, Facilities Infrastructure and Operations	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
TOTAL, EPA	$3,121,552.1	$3,125,503.0	$3,163,403.0	$3,176,364.0	$12,961.0

Program Area: Homeland Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$6,219.1	$6,345.0	$6,248.0	$6,415.0	$167.0
Science & Technology	$2,023.9	$594.0	$585.0	$594.0	$9.0
Building and Facilities	***$10,372.2***	***$7,870.0***	***$7,747.0***	***$8,070.0***	***$323.0***
Hazardous Substance Superfund	$636.7	$594.0	$585.0	$1,194.0	$609.0
Total Budget Authority / Obligations	$19,251.9	$15,403.0	$15,165.0	$16,273.0	$1,108.0
Total Workyears	2.3	3.0	3.0	3.0	0.0

Program Project Description:

This program ensures that EPA's physical structures and assets are secure and that certain physical security measures are in place to help safeguard staff in the event of an emergency and protect the capability of EPA's vital infrastructure assets. This program also includes protecting national security information through construction and build-out of Secure Access Facilities (SAFs) and Sensitive Compartmented Information Facilities (SCIFs), protecting the personnel security clearance process, and protecting any classified information. The work under the Building and Facilities appropriation supports larger physical security improvements to leased and owned space.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to implement Homeland Security Presidential Directive 12 (HSPD-12: the Smart Card Directive) through upgrading or replacing physical access control systems and the ancillary infrastructure at five to eight EPA facilities nationwide. Additionally, EPA will continue installing blast resistant glass materials or procuring and installing laminated glass windows at the Agency's Security Level 3 and 4 facilities as well as facilities housing critical infrastructures. EPA also will continue to mitigate vulnerabilities, in accordance with the *Department of Justice, United States Marshals Service, Vulnerability Assessment of Federal Facilities* guidelines, at its 191 facilities nationwide. Finally, the Agency will ensure new construction, new leased, and major modernization projects meet Federal physical security requirements; expand or realign existing laboratories for homeland security support activities; and protect critical infrastructures under HSPD-7.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$200.0) In support of HSPD-20, this increase provides funding for emergency back-up power capabilities at EPA homeland security laboratories.

- (+$123.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

Public Health Security and Bioterrorism Emergency and Response Act of 2002; Secure Embassy Construction and Counterterrorism Act (Sections 604 and 629).

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Science & Technology	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Building and Facilities	***$28,672.1***	***$26,931.0***	***$26,511.0***	***$26,931.0***	***$420.0***
Leaking Underground Storage Tanks	$848.5	$901.0	$887.0	$902.0	$15.0
Oil Spill Response	$500.4	$490.0	$488.0	$496.0	$8.0
Hazardous Substance Superfund	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

Buildings and Facilities (B&F) appropriation activities include design, construction, repair and improvement projects for buildings occupied by EPA, whether Federally owned or leased. Construction and alteration projects more than $85,000 must use B&F funding. Deferring maintenance often increases the eventual cost of maintenance projects and may worsen other repair issues.

FY 2009 Activities and Performance Plan:

These resources help to improve operating efficiency, sustain safe work environments, and encourage the use of new, advanced technologies and advanced energy sources. Additionally, the Agency will meet the Federal facility environmental objectives related to efficient and sustainability building management practices as required by Executive Orders and the Energy Policy Act of 2005, to attain energy reductions of three percent and water reductions of two percent a year through 2015.

EPA's efforts will include implementing the findings of comprehensive facility energy audits; safety, health, and environmental management audits; sustainable building design in Agency construction and alteration projects; and the use of off-grid energy equipment, energy load reduction strategies, and Energy Star rated buildings. The Agency also will continue to review proposed and previously submitted energy reduction project requests for prioritization and funding.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$420.0) This change reflects restoration of the 1.56% rescission to all program projects to fund facilities support costs.

Statutory Authority:

Federal Property and Administration Services Act; Public Building Act; Annual Appropriations Act; Robert T. Stafford Disaster Relief and Emergency Assistance Act; CWA; CAA; RCRA; TSCA; NEPA; CERFA; D.C. Recycling Act of 1988; EPACT of 2005; Executive Orders 10577, 12598, 13150 and 13423; Emergency Support Functions (ESF) #10 Oil and Hazardous Materials Response Annex; Homeland Security Presidential Decision Directive 63 (Critical Infrastructure Protection).

Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification

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APPROPRIATION: Hazardous Substance Superfund
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund					
Budget Authority	$1,352,419.3	$1,244,706.0	$1,253,998.0	$1,264,233.0	$10,235.0
Total Workyears	3,147.0	3,205.9	3,233.8	3,185.8	-48.0

Program Projects in Superfund
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Air Toxics and Quality					
Radiation: Protection	$1,960.9	$2,373.0	$2,342.0	$2,414.0	$72.0
Audits, Evaluations, and Investigations					
Audits, Evaluations, and Investigations	$12,286.2	$7,149.0	$11,486.0	$7,164.0	($4,322.0)
Compliance					
Compliance Assistance and Centers	$11.1	$22.0	$22.0	$22.0	$0.0
Compliance Incentives	$139.4	$144.0	$159.0	$146.0	($13.0)
Compliance Monitoring	$1,487.0	$1,182.0	$1,165.0	$1,192.0	$27.0
Subtotal, Compliance	$1,637.5	$1,348.0	$1,346.0	$1,360.0	$14.0
Enforcement					
Environmental Justice	$911.1	$757.0	$745.0	$757.0	$12.0
Superfund: Enforcement	$164,108.2	$161,610.0	$164,845.0	$163,678.0	($1,167.0)
Superfund: Federal Facilities Enforcement	$8,846.2	$9,843.0	$9,726.0	$10,225.0	$499.0
Civil Enforcement	$739.2	$884.0	$870.0	$0.0	($870.0)
Criminal Enforcement	$7,895.7	$9,167.0	$9,053.0	$7,830.0	($1,223.0)
Enforcement Training	$630.7	$840.0	$827.0	$858.0	$31.0
Forensics Support	$2,805.2	$2,310.0	$3,750.0	$2,441.0	($1,309.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Subtotal, Enforcement	$185,936.3	$185,411.0	$189,816.0	$185,789.0	($4,027.0)
Homeland Security					
Homeland Security: Communication and Information	$300.0	$0.0	$0.0	$0.0	$0.0
Homeland Security: Critical Infrastructure Protection					
Decontamination	$61.8	$198.0	$195.0	$198.0	$3.0
Homeland Security: Critical Infrastructure Protection (other activities)	$1,575.4	$1,659.0	$1,633.0	$1,481.0	($152.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	$1,637.2	$1,857.0	$1,828.0	$1,679.0	($149.0)
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	$6,913.3	$10,527.0	$10,371.0	$10,620.0	$249.0
Laboratory Preparedness and Response	$8,519.1	$6,064.0	$5,971.0	$9,589.0	$3,618.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$34,885.7	$28,689.0	$28,287.0	$36,467.0	$8,180.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$50,318.1	$45,280.0	$44,629.0	$56,676.0	$12,047.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$636.7	$594.0	$585.0	$1,194.0	$609.0
Subtotal, Homeland Security	$52,892.0	$47,731.0	$47,042.0	$59,549.0	$12,507.0
Information Exchange / Outreach					
Congressional, Intergovernmental, External Relations	$137.5	$155.0	$154.0	$0.0	($154.0)
Exchange Network	$1,374.2	$1,433.0	$1,411.0	$1,433.0	$22.0
Subtotal, Information Exchange / Outreach	$1,511.7	$1,588.0	$1,565.0	$1,433.0	($132.0)
IT / Data Management / Security					
Information Security	$562.3	$792.0	$780.0	$801.0	$21.0
IT / Data Management	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Subtotal, IT / Data Management / Security	$16,537.8	$17,130.0	$16,863.0	$17,673.0	$810.0
Legal / Science / Regulatory / Economic Review					

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Alternative Dispute Resolution	$1,020.6	$837.0	$825.0	$846.0	$21.0
Legal Advice: Environmental Program	$826.8	$606.0	$740.0	$631.0	($109.0)
Subtotal, Legal / Science / Regulatory / Economic Review	$1,847.4	$1,443.0	$1,565.0	$1,477.0	($88.0)
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$46,016.9	$44,997.0	$44,295.0	$45,353.0	$1,058.0
Utilities	$1,619.3	$2,466.0	$2,428.0	$3,042.0	$614.0
Security	$4,308.9	$6,767.0	$6,661.0	$6,524.0	($137.0)
Facilities Infrastructure and Operations (other activities)	$18,319.9	$20,726.0	$20,403.0	$21,351.0	$948.0
Subtotal, Facilities Infrastructure and Operations	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Financial Assistance Grants / IAG Management	$2,671.4	$3,049.0	$3,001.0	$3,116.0	$115.0
Acquisition Management	$19,129.3	$24,645.0	$24,327.0	$24,985.0	$658.0
Human Resources Management	$5,203.0	$5,036.0	$4,969.0	$5,063.0	$94.0
Central Planning, Budgeting, and Finance	$20,428.7	$24,306.0	$24,008.0	$26,102.0	$2,094.0
Subtotal, Operations and Administration	$117,697.4	$131,992.0	$130,092.0	$135,536.0	$5,444.0
Research: Human Health and Ecosystems					
Human Health Risk Assessment	$3,926.4	$3,972.0	$3,910.0	$3,325.0	($585.0)
Research: Land Protection					
Research: Land Protection and Restoration	$23,859.1	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Research: SITE Program	$255.1	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Land Protection	$24,114.2	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Research: Sustainability					
Research: Sustainability	$212.3	$0.0	$0.0	$0.0	$0.0
Superfund Cleanup					
Superfund: Emergency Response and Removal	$222,093.7	$191,880.0	$190,011.0	$193,853.0	$3,842.0
Superfund: EPA Emergency Preparedness	$9,101.6	$9,318.0	$9,195.0	$9,504.0	$309.0
Superfund: Federal Facilities	$31,763.5	$31,879.0	$31,447.0	$31,440.0	($7.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Superfund: Remedial	$659,513.4	$584,836.0	$591,078.0	$586,120.0	($4,958.0)
Superfund: Support to Other Federal Agencies	$4,967.0	$6,575.0	$6,472.0	$6,575.0	$103.0
Brownfields Projects	$4,420.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Brownfields Projects	$4,420.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Superfund Cleanup	$931,859.2	$824,488.0	$828,203.0	$827,492.0	($711.0)
TOTAL, EPA	$1,352,419.3	$1,244,706.0	$1,253,998.0	$1,264,233.0	$10,235.0

Program Area: Air Toxics And Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$10,172.7	$10,186.0	$10,057.0	$10,533.0	$476.0
Science & Technology	$2,126.1	$2,120.0	$2,087.0	$2,109.0	$22.0
Hazardous Substance Superfund	***$1,960.9***	***$2,373.0***	***$2,342.0***	***$2,414.0***	***$72.0***
Total Budget Authority / Obligations	$14,259.7	$14,679.0	$14,486.0	$15,056.0	$570.0
Total Workyears	89.2	88.6	88.6	88.6	0.0

Program Project Description:

This program addresses potential radiation risks found at some Superfund and hazardous waste sites. Through this program, EPA ensures that Superfund site clean-up activities reduce and/or mitigate the health and environmental risk of radiation to safe levels. In addition, the program makes certain that appropriate clean up technologies and methods are adopted to effectively and efficiently reduce the health and environmental hazards associated with radiation problems encountered at the sites. Finally, the program ensures that appropriate technical assistance is provided on remediation approaches for National Priorities List (NPL) and non-NPL sites.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's National Air and Radiation Environmental Laboratory (NAREL) and Radiation and Indoor Environments National Laboratory (R&IE) will continue to provide analytical support to manage and mitigate radioactive releases and exposures. Both labs routinely provide analytical and technical support for the characterization and cleanup of Superfund and Federal Facility sites. Laboratory support focuses on providing high quality data to support Agency decisions at sites across the country. In addition, both labs provide data evaluation and assessment, document review and field support through on-going fixed and mobile capability. Thousands of radiochemical and mixed waste analyses (NAREL is EPA's only laboratory with in-house mixed waste analytical capability) are performed annually at NAREL on a variety of matrices from contaminated sites. R&IE also provides field-based analytical capability for screening and identifying radiological contaminants at NPL and non-NPL sites across the country, including mobile scanning and air sampling equipment and personnel.

Performance Targets:

EPA expects to be on track through its ongoing work to accomplish its 2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive waste and to minimize impacts to public health from radiation exposure.

The Office of Management and Budget (OMB) recently approved several outcome-oriented strategic and annual performance measures for this program in conjunction with its 2007 PART assessment. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets. The Radiation Program received a rating of "moderately effective."

FY 2009 Change from FY 2008 Enacted (Dollars in Thousands):

- (+$168.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$96.0) This reduction reflects the net change after restoring the FY 2008 Omnibus 1.56% rescission and reducing funding for analysis associated with mixed waste sites.

Statutory Authority:

CERCLA, as amended by the SARA of 1986.

Program Area: Audits, Evaluations And Investigations

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Inspector General	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
Hazardous Substance Superfund	***$12,286.2***	***$7,149.0***	***$11,486.0***	***$7,164.0***	***($4,322.0)***
Total Budget Authority / Obligations	$44,574.6	$45,157.0	$52,585.0	$46,647.0	($5,938.0)
Total Workyears	307.5	331.8	331.8	331.8	0.0

Program Project Description:

EPA's Office of Inspector General (OIG) provides audit, evaluation, investigative, inspection, and public liaison services and products that fulfill the requirements of the Inspector General Act, as amended, by identifying fraud, waste, and abuse in Agency, grantee and contractor operations, and by promoting economy, efficiency, and effectiveness in the operations of the Agency's Superfund program. OIG activities add value and enhance public trust by providing the Agency, the public, and Congress with independent analyses and recommendations that help resolve management challenges and identify best practices for safeguarding EPA resources and accomplishing EPA's environmental goals. OIG activities also prevent and detect fraud in EPA programs and operations, including financial fraud, lab fraud, and cyber crime.

FY 2009 Activities and Performance Plan:

The EPA OIG will assist the Agency in its efforts to reduce environmental and human health risks by helping to improve Superfund program operations, save taxpayer dollars, and resolve major management challenges. In FY 2009, the OIG will continue focusing on land restoration and reuse as well as areas associated with risk, fraud, waste, and verification of data used to support actions and reported results. The OIG will identify high risk areas and opportunities to reduce administrative overhead, and make recommendations to mitigate those risks and improve operating efficiency leading to positive environmental impacts and the cost effective attainment of EPA's goals related to the Superfund program.

Audits and Evaluations

OIG audits and evaluations related to the Superfund program will determine if EPA is making progress toward efficiently and effectively reducing human health risks; taking effective enforcement actions; cleaning up hazardous waste; restoring previously polluted sites to appropriate uses; and ensuring long-term stewardship of polluted sites. The OIG will evaluate how effectively EPA and other Federal agencies have addressed and resolved human health and environmental risks at facilities on the National Priorities List and other sites that are supported by Superfund resources.

Prior audits and evaluations of the Superfund program have identified numerous barriers to implementing effective resource management and program improvements, especially in the high-dollar value areas of special account management. The OIG will review: (1) EPA's management of Superfund special accounts, actions on closing accounts, and other actions to improve management of these accounts; (2) recording and collection of Superfund accounts receivable; (3) cost recovery at Superfund Federal facilities; (4) Superfund post-construction activities (review and verify documentation for sites that have been designated construction complete); (5) follow-up on millions of dollars not redistributed to Superfund sites; and (6) funds obligated for Superfund interagency agreements and cooperative agreements with states. The OIG will also evaluate ways to minimize fraud, waste, and abuse, and maximize results achieved from its Superfund contracts and assistance agreements.

Investigations

OIG investigations include efforts to uncover criminal activity pertaining to the Superfund program. The OIG will conduct investigations into allegations or indications, and seek prosecution, of: 1) fraudulent practices in awarding, performing, charging, and payment on EPA Superfund contracts, grants, or other assistance agreements; 2) program fraud or other acts that undermine the integrity of, or confidence in, the Superfund program and create imminent environmental risks; 3) false claims for erroneous laboratory results that undermine the bases for Superfund decision-making, regulatory compliance, or enforcement actions; and 4) intrusions into EPA's computer systems as well as incidents of computer misuse. Further, the OIG will assist EPA in testing environmental information technology infrastructure and information networks against threats of intrusion or destruction.

Public Liaison

Public liaison work will continue to address critical public and governmental concerns related to the Superfund program. This activity involves responding to requests from the public, Congress, EPA employees, or other government entities for information and responses to complaints or allegations of fraud, waste, abuse, or mismanagement in EPA's Superfund program. To accomplish this work, the Inspector General initiates reviews and, if needed, contracts with subject matter experts to assist with such reviews, and coordinates these efforts with ongoing audits, evaluations, or investigations. Areas to be addressed will include the Superfund community involvement plan (effectiveness and consistency in Regional offices), and the Superfund site information repository.

Follow-up

To further promote economy, efficiency and effectiveness, the OIG will conduct follow-up reviews of Agency responsiveness to OIG recommendations for the Superfund program to determine if appropriate actions have been taken and intended improvements have been achieved. This process will serve as a means for keeping EPA leadership apprised of needed accomplishments and corrective actions, and will facilitate greater accountability for results from OIG operations.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$2,953.0) This is the net effect of a reallocation of payroll resources to reflect FTE distribution between the Inspector General and Superfund Transfer appropriations, as well as an increase for payroll and cost of living for remaining FTE.

- (-$1,551.0) This decrease reflects a reduction to non-payroll resources, including contract work and other support costs.

- (+$182.0) This change reflects restoration of the 1.56% rescission to all program projects.

- (-27.9 FTE) This reflects a redistribution of FTE between the Inspector General and Superfund Transfer appropriations.

Statutory Authority:

Inspector General Act, as amended; SARA; CERCLA; TSCA.

Program Area: Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$28,226.9	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
Leaking Underground Storage Tanks	$644.1	$688.0	$709.0	$753.0	$44.0
Oil Spill Response	$267.9	$291.0	$286.0	$303.0	$17.0
Hazardous Substance Superfund	***$11.1***	***$22.0***	***$22.0***	***$22.0***	***$0.0***
Total Budget Authority / Obligations	$29,150.0	$30,548.0	$28,742.0	$27,513.0	($1,229.0)
Total Workyears	205.7	208.4	208.4	198.4	-10.0

Program Project Description:

The Compliance Assistance and Centers program includes a range of activities and tools designed to improve compliance with Superfund-related environmental laws. Regulated entities, Federal agencies, and the public benefit from easy access to tools that help them understand these laws and find effective, efficient means for putting them into practice. To achieve these goals, the Compliance Assistance and Centers (CAC) program provides information, training and technical assistance to the regulated community to increase its understanding of statutory and regulatory environmental requirements, thereby gaining measurable improvements in compliance and reducing risks to human health and the environment. The program also provides tools and information to other compliance assistance providers in order to help the regulated community comply with environmental requirements.[1]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to provide general and targeted compliance assistance to the regulated community and integrate assistance into its enforcement and compliance assurance efforts. Superfund-related compliance assistance activities are mainly reported and tracked through the Agency's Integrated Compliance Information System (ICIS). In FY 2009, the Compliance Assistance program will provide Superfund support for ICIS and the ongoing enhancements to ICIS for continued support of the federal enforcement and compliance program. EPA will continue to ensure the security and integrity of these systems, and will use ICIS data to support Superfund-related regulatory enforcement program activities.

[1] For more information, refer to: www.epa.gov/compliance/assistance/index.html; www.epa.gov/clearinghouse; and www.assistancecenters.net.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, at OMB's direction, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

EPA's Compliance Assistance Program achieves pollutant reductions, improves regulated entities' environmental management practices, and increases regulated entities understanding of environmental requirements through direct compliance assistance provided by EPA personnel, and through on-line compliance assistance centers and the clearinghouse.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$104.0) This increase is the net effect of increases for payroll and cost of living for existing FTE.

- (-$1,619.0 / -5.0 FTE) This sustains a congressional decrease for compliance assistance centers in the FY 2008 Omnibus.

- (+$225.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to several technical changes such as realignment of IT, travel and other support costs across programs

Statutory Authority:

RCRA; CERCLA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

Compliance Incentives
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$9,448.8	$9,786.0	$10,618.0	$10,263.0	($355.0)
Hazardous Substance Superfund	***$139.4***	***$144.0***	***$159.0***	***$146.0***	***($13.0)***
Total Budget Authority / Obligations	$9,588.2	$9,930.0	$10,777.0	$10,409.0	($368.0)
Total Workyears	66.2	74.6	74.6	71.1	-3.5

Program Project Description:

To improve compliance with Superfund-related environmental laws, EPA actively encourages business owners and operators that run similar operations at multiple facilities to disclose their violations to the Agency. These disclosures allow entities to review their operations holistically, and often nationally, which more effectively benefits the environment. Under EPA's Audit Policy, when companies voluntarily discover and promptly correct environmental violations, EPA may waive or substantially reduce civil penalties. Activities are tracked and reported using the Integrated Compliance Information System (ICIS).[2]

FY 2009 Activities and Performance Plan:

In FY 2009, the Compliance Incentives program will provide Superfund support for ICIS and ongoing enhancements to continue support of the Federal enforcement and compliance program. EPA will continue to ensure the security and integrity of these systems, and will use ICIS data to support Superfund-related regulatory enforcement program activities.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

[2] For more information, refer to: www.epa.gov/compliance/incentives/programs/index.html.

Performance Targets:

EPA's Compliance Incentive programs encourage regulated entities to monitor and quickly correct environmental violations to achieve pollutant reductions, and improvements in regulated entities' environmental management practices. One of the key Civil Enforcement PART program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Although the estimated pollution reductions resulting from enforcement actions taken by EPA have grown over the past 5 years, these pollutant reductions are projections based on the settlement agreements entered during each specific fiscal year. One or two cases can have a significant effect on the end-of-year results.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$37.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (+$24.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

Compliance Monitoring
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$90,724.6	$93,428.0	$88,726.0	$96,025.0	$7,299.0
Hazardous Substance Superfund	***$1,487.0***	***$1,182.0***	***$1,165.0***	***$1,192.0***	***$27.0***
Total Budget Authority / Obligations	$92,211.6	$94,610.0	$89,891.0	$97,217.0	$7,326.0
Total Workyears	625.8	629.5	629.5	623.0	-6.5

Program Project Description:

The Compliance Monitoring program reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions, and settlement agreements by conducting compliance inspections/evaluations, investigations, record reviews, and information requests, and by responding to tips and complaints from the public. The program conducts these activities to determine whether conditions that exist may present imminent and substantial endangerment to human health or the environment and to verify whether regulated sites are in compliance with environmental laws and regulations.

The Superfund portion of the Compliance Monitoring program focuses on providing information system support for monitoring compliance with Superfund-related environmental regulations and contaminated site clean-up agreements. The program also will ensure the security and integrity of its compliance information systems.

FY 2009 Activities and Performance Plan:

Superfund-related compliance monitoring activities are mainly reported and tracked through the Agency's Integrated Compliance Information System (ICIS). In FY 2009, the Compliance Monitoring program will provide Superfund support for ICIS and the ongoing enhancements to ICIS for continued support of the Federal enforcement and compliance program. EPA will continue to ensure the security and integrity of these systems, and will use ICIS data to support Superfund-related regulatory enforcement program activities. In FY 2009, EPA will spend $190K in this program project for ICIS-related work.

EPA will continue to make Superfund-related compliance monitoring information available to the public through the Enforcement and Compliance History On-line (ECHO) Internet website in FY 2009. This site provides communities with information on compliance status. EPA will continue to develop additional tools and data for public use. ECHO is a valuable tool, averaging approximately 75,000 queries per month.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated.	27	30	30	30	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of concluded enforcement cases requiring implementation of improved environmental management practices.	70	70	70	70	Percentage

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

EPA's Monitoring and Enforcement Program achieves pollutant reductions, and improvements in regulated entities' environmental management practices through the settlement of enforcement cases. One of the key Civil Enforcement PART program measures, pounds of pollutants

reduced, looks at the overall reduction in pollution as a result of enforcement actions[3]. The Agency is exploring methodologies to extend the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Although the estimated pollution reductions resulting from enforcement actions taken by EPA have grown over the past 5 years, these pollutant reductions are projections based on the settlement agreements entered during each specific fiscal year. One or two cases can have a significant effect on the end-of-year results. Thus the targets estimated for 2008 and 2009 are based on what was achieved in the previous two years. Actuals in 2008 and 2009 could vary from these targets.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$20.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$7.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

[3] With the adoption of the Clean Air Interstate Rule, pollution reduction will move from an enforcement category to a regulatory category; therefore, the enforcement targets should not be expected to increase, although overall pollution reduction is certain to increase.

Program Area: Enforcement

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$6,319.2	$3,822.0	$6,399.0	$3,811.0	($2,588.0)
Hazardous Substance Superfund	***$911.1***	***$757.0***	***$745.0***	***$757.0***	***$12.0***
Total Budget Authority / Obligations	$7,230.3	$4,579.0	$7,144.0	$4,568.0	($2,576.0)
Total Workyears	23.0	16.9	16.9	16.9	0.0

Program Project Description:

The Environmental Justice (EJ) program addresses environmental and/or human health concerns in all communities, including minority and/or low-income communities. Research has shown that the minority and low-income segments of the population have been, or could be, disproportionately exposed to environmental harm and risks. Thus, EPA focuses attention on minority and low-income communities to ensure that EPA actions do not adversely affect these or any other communities that face critical environmental or public health issues.

The Environmental Justice program also provides education, outreach, and data to communities and facilitates the integration of environmental justice considerations into Agency programs, policies, and activities. It compliments and enhances the community outreach work done under the Superfund program at affected sites. The Agency also supports state and Tribal environmental justice (EJ) programs and conducts outreach and technical assistance to states, local governments, and stakeholders on environmental justice issues.[4]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to enhance its environmental justice integration and collaborative problem-solving initiatives. By fully integrating environmental justice considerations within its programs, policies, and activities, EPA will build greater capacity within its Headquarters and Regional offices to better address the environmental and/or human health concerns of all communities, and build collaborative problem-solving capacity within communities affected disproportionately by environmental risks and harms, including minority and/or low-income communities.

[4] For more information on the Environmental Justice program, please refer to: www.epa.gov/compliance/environmentaljustice/index.html.

EPA will continue to manage its Environmental Justice Small Grants program, which assists community-based organizations in developing solutions to local environmental issues.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports the Healthy Communities objective 4.2.2. By 2011, 30 communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies.

EPA will measure the results from the Environmental Justice program by tracking the cumulative number of communities with potential environmental justice concerns that achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$12.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

Executive Order 12898; CERCLA, as amended.

Superfund: Enforcement
Program Area: Enforcement
Goal: Land Preservation and Restoration
Objective(s): Restore Land

Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$164,108.2***	***$161,610.0***	***$164,845.0***	***$163,678.0***	***($1,167.0)***
Total Budget Authority / Obligations	$164,108.2	$161,610.0	$164,845.0	$163,678.0	($1,167.0)
Total Workyears	942.8	971.9	971.9	961.2	-10.7

Program Project Description:

EPA negotiates cleanup and removal agreements with Potentially Responsible Parties (PRPs) at hazardous waste sites and, where negotiations fail, the Agency either takes enforcement actions to require cleanup or expends Superfund Trust Fund dollars to remediate the sites. When EPA uses appropriated Trust Fund dollars, the Superfund Enforcement program takes action against PRPs to recover the cleanup costs. The Department of Justice (DOJ) supports EPA's Superfund Enforcement program through negotiations and judicial actions to compel PRP clean-up and litigation to recover Trust Fund monies spent on cleanup. In tandem with this approach, EPA has implemented various reforms to increase fairness, reduce transaction costs, and promote economic development and make sites available for appropriate re-use. EPA also works to ensure that required legally enforceable institutional controls and financial assurance requirements are in place at Superfund sites to ensure the long-term protectiveness of Superfund cleanup actions.

The Agency establishes and uses site-specific Special Accounts, sub-accounts within the Trust Fund, where applicable. Special Accounts segregate funds obtained from responsible parties who enter into settlement agreements with EPA. These funds act as an incentive for other PRPs to perform cleanup work and can be used by the Agency to fund cleanup at that site. Consequently, the Agency can sustain the "polluter pays" principle, clean up more sites, and preserve appropriated dollars for sites without viable PRPs. Since the program's inception, EPA has achieved more than $8 in private party cleanup commitments and cost recovery for every $1 spent on Superfund litigation costs.

FY 2009 Activities and Performance Plan:

The Agency's Superfund program pursues an "enforcement first" policy to ensure that sites for which there are viable, liable responsible parties are cleaned up by those parties. In tandem with this approach, various Superfund reforms have been implemented to increase fairness, reduce

transaction costs, and promote economic redevelopment.[5] EPA also will work to ensure that required legally enforceable institutional controls and financial assurance requirements are in place at Superfund sites to ensure the long-term protectiveness of Superfund cleanup actions.

Throughout FY 2009, the Superfund Enforcement program will maximize PRP participation in cleanups while promoting fairness in the enforcement process and will continue to recover costs from PRPs when EPA expends money from the Trust Fund. The Agency will maximize PRP participation by reaching a settlement or taking an enforcement action by the time of a remedial action start at 95 percent of non-Federal Superfund sites that have viable, liable parties. The Agency also will continue to ensure Trust Fund stewardship through cost recovery efforts that include addressing -- prior to the end of the statute of limitations period -- 100 percent of past costs at sites where total past costs are equal to or greater than $200,000. The Agency also will continue efforts to address past costs at sites where total costs are below $200,000.

In FY 2009, the Agency will provide the DOJ with $23.9 million, through an Interagency Agreement (IAG), to provide support for EPA's Superfund Enforcement program through such actions as negotiating consent decrees with PRPs, preparing judicial actions to compel PRP clean-up, and litigating to recover monies spent in cleaning up contaminated sites. EPA's Superfund enforcement program is responsible for case development and preparation, referral to DOJ, and post-filing actions as well as for providing case and cost documentation support for the docket of current cases with DOJ. The program also ensures that EPA meets cost recovery statute of limitation deadlines, resolves cases, issues bills timely for oversight, and makes collections in a timely manner. By pursuing cost recovery settlements, the program promotes the principle that polluters should either perform or pay for cleanups which preserves appropriated Trust Fund resources to address contaminated sites where there are no viable, liable PRPs. The Agency's expenditures will be recouped through administrative actions and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 107 case referrals. The Agency also will continue to refer delinquent accounts receivable to DOJ for debt collection enforcement.

In FY 2009, the Agency will negotiate remedial design/remedial action cleanup agreements and removal agreements at contaminated properties. Where negotiations fail, the Agency will either take unilateral enforcement actions to require PRP cleanup or use appropriated dollars to remediate sites. When appropriated dollars are used to clean up sites, the program will recover the associated cleanup costs from the PRPs. The Agency also will continue its efforts to establish and use special accounts to facilitate cleanup to improve tracking and projection of special account funds designated for specific construction activities.

During FY 2009, the Agency will continue the financial management aspects of Superfund cost recovery and the collection of related debt. These efforts include tracking and managing Superfund delinquent debt, maintaining the Superfund Cost Recovery Package Imaging and On-Line System (SCORPIOS), and using SCORPIOS to prepare cost documentation packages. The Agency will continue to refine and streamline the cost documentation process to gain further efficiencies; provide DOJ case support for Superfund sites; and calculate indirect cost and annual

[5] For more information about EPA's Superfund enforcement program, and its various components, refer to: www.epa.gov/ compliance/cleanup/superfund/.

allocation rates to be applied to direct costs incurred by EPA for site cleanup. The Agency also will continue to maintain the accounting and billing of Superfund oversight costs attributable to responsible parties. These costs represent EPA's cost of overseeing Superfund site clean-up efforts by responsible parties as stipulated in the terms of settlement agreements.

A critical component of many response actions selected by EPA is institutional controls. These are established to ensure that property is used and maintained in an appropriate manner that protects the public health after construction of the physical remedy is complete. The Superfund program will oversee the implementation and enforcement of institutional controls as part of its remedies, focusing on sites where construction of engineered remedies has been completed.

EPA also plans further improvements to its budgeting and planning system, Financial Data Warehouse, business intelligence tools, and reporting capabilities which will support the Superfund program. These improvements will support EPA's "green" score in financial performance on the President's Management Agenda scorecard by providing more accessible data to support accountability, budget and performance integration, and management decision-making. During FY 2009, EPA also will continue to explore additional methods in its financial services to achieve greater efficiency.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.	98	95	95	95	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	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	98	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	recovered.					

The Superfund Enforcement Program measures the Volume of Contaminated Media Addressed (VCMA), which is a companion to the pounds of pollutants reduced. This represents the volume of contaminated media (e.g., soil, groundwater, sediment) addressed through completed enforcement actions.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,927.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-11.0 FTE) As the program has matured, fewer resources are needed to identify, locate and reach settlement with PRPs to clean up sites or recover Trust Fund monies expended.
- (-$5,334.0) This reduces Congressionally-directed funding in the FY 2008 Omnibus.
- (-$162.0) This change reflects the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Comprehensive Environmental Response, Compensation, and Liability Act; CERCLA; SBLRBRERA; CERFA; NEPA; AEA; UMTRLWA; PHSA; Safe Drinking Water Act; CCA; FGCAA; FAIR; Federal Acquisition Regulations; FMFIA; FOIA; GMRA; IPIA; IGA; PRA; Privacy Act; CFOA; Government Performance and Results Act; The Prompt Payment Act; Executive Order 12241; Executive Order 12656.

Superfund: Federal Facilities Enforcement
Program Area: Enforcement
Goal: Land Preservation and Restoration
Objective(s): Restore Land

Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$8,846.2***	***$9,843.0***	***$9,726.0***	***$10,225.0***	***$499.0***
Total Budget Authority / Obligations	$8,846.2	$9,843.0	$9,726.0	$10,225.0	$499.0
Total Workyears	61.3	74.3	74.3	72.8	-1.5

Program Project Description:

The Superfund Federal Facilities Enforcement program ensures that 1) all Federal facility sites on the National Priorities List have interagency agreements (IAGs), which provide enforceable schedules for the progression of the entire cleanup; 2) these IAGs are monitored for compliance; and 3) Federal sites that are transferred to new owners are transferred in an environmentally responsible manner. After years of service and operation, some Federal facilities contain environmental contamination, such as hazardous wastes, unexploded ordnance, radioactive wastes or other toxic substances. To enable the cleanup and reuse of such sites, the Federal Facilities Enforcement program coordinates creative solutions that protect both human health and the environment. These enforcement solutions help restore facilities so they can once again serve an important role in the economy and welfare of local communities and our country.

FY 2009 Activities and Performance Plan:

Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 120, EPA will enter into IAGs with responsible Federal entities to ensure protective cleanup at a timely pace in FY 2009. EPA also will monitor milestones in existing IAGs, resolve disputes, and oversee all remedial work being conducted at Federal facilities. EPA also works to ensure that required legally enforceable institutional controls and financial assurance requirements are in place at Superfund sites to ensure the long-term protectiveness of Superfund cleanup actions. EPA also will continue its work with affected agencies to resolve outstanding policy issues relating to the cleanup of Federal facilities.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, at OMB's direction, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other

measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

The Superfund Enforcement Program measures the Volume of Contaminated Media Addressed (VCMA), which is a companion to the pounds of pollutants reduced. This represents the volume of contaminated media (e.g., soil, groundwater, sediment) addressed through completed enforcement actions. The Agency is exploring methodologies to extend the measure by analyzing the risk associated with the contaminated media addressed. This may entail analysis of pollutant hazards and population exposure. Work under this program supports Restore Land and Improve Compliance objective, although currently no specific performance measures exist for the program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$282.0) This reflects a net increase for payroll and cost of living for existing FTE.
- (-1.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities
- (+$217.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. Funds will support policy and oversight in the federal facilities program.

Statutory Authority:

CERCLA; SBLRBRERA; DBCRA; Defense Authorization Amendments; BRAC; PPA; CERFA; NEPA; AEA; UMTRLWA; PHSA; DRAA; SDWA; Executive Order 12241; Executive Order 12656.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$123,003.7	$126,645.0	$129,886.0	$133,017.0	$3,131.0
Oil Spill Response	$1,661.5	$2,065.0	$2,072.0	$2,233.0	$161.0
Hazardous Substance Superfund	***$739.2***	***$884.0***	***$870.0***	***$0.0***	***($870.0)***
Total Budget Authority / Obligations	$125,404.4	$129,594.0	$132,828.0	$135,250.0	$2,422.0
Total Workyears	914.1	969.1	969.1	958.2	-10.9

Program Project Description:

The overarching goal of the Civil Enforcement program is to protect human health and the environment, targeting Superfund-related enforcement actions according to degree of health and environmental risk posed by environmental violations. The Superfund portion of the program collaborated with the Department of Justice (DOJ) to ensure consistent and fair enforcement of Superfund-related environmental laws and regulations.

FY 2009 Activities and Performance Plan:

The Office of Enforcement and Compliance Assurance has achieved efficiencies through the Agency's workforce management strategy that will help the program better align resources, skills, and Agency priorities to other programs; therefore, resources for Superfund portion of the civil enforcement program will not be requested in FY 2009.

Performance Targets:

EPA's Monitoring and Enforcement Program achieves pollutant reductions and improvements in regulated entities' environmental management practices through the settlement of enforcement cases. There are many programs evaluated under the Civil Enforcement PART assessment. These programs include Compliance Assistance, Compliance Incentives, Compliance Monitoring, Civil Enforcement, Enforcement Training, Forensics, Superfund Enforcement, and categorical grant programs for toxic substances and sectors. One of the key Civil Enforcement PART program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Although the estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years, they are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year and one or two cases can have a significant affect on the end-of-year results. Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$176.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-$300.0 / -1.7 FTE) This decrease reduces support for ensuring national consistency for the enforcement of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 103; and Emergency Planning, and Community Right-to-know Act (EPCRA) section 304 accidental release reporting requirements.

- (-$394.0) This change reflects the net restoration of the 1.56% rescission to all program projects in addition to several technical changes such as realignment of IT, travel or other support costs across programs

Statutory Authority:

RCRA; CERCLA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA; SBLRBRERA; PPA; CERFA; AEA; UMTRLWA.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$39,721.6	$39,688.0	$40,742.0	$44,384.0	$3,642.0
Hazardous Substance Superfund	***$7,895.7***	***$9,167.0***	***$9,053.0***	***$7,830.0***	***($1,223.0)***
Total Budget Authority / Obligations	$47,617.3	$48,855.0	$49,795.0	$52,214.0	$2,419.0
Total Workyears	259.2	268.9	268.9	278.1	9.2

Program Project Description:

The criminal enforcement program investigates and helps prosecute violations of Superfund and Superfund-related laws which seriously threaten public health and the environment, and which involve knowing, deliberate, or criminal behavior on the part of the violator. The criminal enforcement program deters violations of Superfund and Superfund related laws by demonstrating that the regulated community will be held accountable, through jail sentences and criminal fines for such violations. Bringing criminal cases sends a strong message to potential violators, enhancing aggregate compliance with laws and regulations.

The criminal enforcement program conducts investigations and requests that cases be prosecuted. Where appropriate, it helps secure plea agreements or sentencing conditions that will require defendants to undertake projects to improve environmental conditions or develop environmental management systems to enhance performance. The Agency is involved in all phases of the investigative process and works with other law enforcement agencies to present a highly visible and effective force in the Agency's overall enforcement strategy. Cases are presented to the Department of Justice for prosecution, with EPA special agents serving as key witnesses in the proceedings.

The program also participates in task forces with state and local law enforcement, and provides specialized training at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA. FLETC provides one of the few opportunities for state, local, and Tribal environmental enforcement professionals to obtain criminal investigation training.[6]

[6] For more information refer to: ww.epa.gov/compliance/criminal/index.html.

FY 2009 Activities and Performance Plan:

In FY 2009, the criminal enforcement program will continue implementing its strategic approach by emphasizing investigations and prosecutions in areas of national and regional Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)-related enforcement priority focus, as well as other types of "high impact" cases that affect human health, the environment, and enhance compliance and deterrence. The criminal enforcement program will continue to enhance its collaboration and coordination with the civil enforcement program to ensure that the enforcement program as a whole responds to violations as effectively as possible. That is accomplished by establishing an effective regional case screening process to identify the most appropriate civil or criminal enforcement responses for a particular violation, and by taking criminal enforcement actions against long-term or repeated significant non-compliers where appropriate. Coordination will also be facilitated by focusing on parallel proceedings and other mechanisms allowing us to use the most appropriate tools to address environmental violations and crimes.

EPA's criminal enforcement program is committed to fair and consistent enforcement of Federal laws and regulations, as balanced with the flexibility to respond to region-specific environmental problems. Criminal enforcement has management oversight controls and national policies in place, to ensure that violators in similar circumstances receive similar treatment under Federal environmental laws. Consistency is promoted by evaluating all investigations from the national perspective; overseeing all investigations to ensure compliance with national priorities; conducting regular "docket reviews" (detailed review of all open investigations in each EPA Area Office) to ensure consistency with investigatory discretion guidance and enforcement priorities, and developing, implementing, and periodically reviewing and revising policies and programs.

In FY 2009, the program will use data from the Criminal Case Reporting System made available through enhancements to be completed in FY 2008. Information associated with all closed criminal enforcement cases will be used to systematically compile a profile of criminal cases, including the extent to which the cases support Agency-wide, program-specific, or Regional enforcement priorities. The profile also will describe the impact of the cases in terms of pollution released into the environment and resulting environmental harm such as the degradation of drinking water wells, human populations injured or made ill, and aquatic or animal life harmed.

In FY 2009, the program also will seek to deter environmental crime by increasing the volume and quality of leads reported to EPA by the public though the tips and complaints link on EPA's website. The web link was established on EPA's homepage in FY 2006.

The EPA Enforcement of Environmental Laws (criminal) PART program received an "adequate" rating in 2004 with the addition of new outcome measures. The program created a measure implementation plan to set targets and milestones for performance measures. The program revised its Case Conclusion Data Sheet, conducted training, and issued the form to begin collecting new data for Criminal Enforcement PART measures. The program developed a target and baseline for the pollution reduction measure in FY 2006. The baselines and targets for

the Recidivism and the Pollutant Impact measures will be developed in FY 2007 and FY 2008, respectively.

Performance Targets:

In FY 2009, the Criminal Enforcement program's Pollution Reduction measure will be reported against the baseline and target set in FY 2006, which uses an average of pollutant reduction data from three fiscal years (FYs 2003-2005). The results of this measure are likely to fluctuate annually due to the specific characteristics of the enforcement cases concluded during a given fiscal year. However, long-term trend analysis of this information will help the program to identify and prioritize cases that present the most serious threats to public health and the environment.

In addition, in FY 2009, the Criminal Enforcement Program will report its PART-approved measures on "improved environmental management" and "recidivism". The program will also develop the targets and baselines for its "pollutant impact" measure (i.e., the amount of illegal pollution released into the environment that cannot be treated, remediated or otherwise reduced) in order to begin external reporting of that measure in FY 2008. Work under this program supports the compliance and environmental stewardship objective. Currently, there are no performance measures specific to this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$1,160.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a FTE reduction and a recalculation of base workforce costs.

- (-10.8 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. It realigns FTEs from the Superfund appropriation to the EPM appropriation to more accurately reflect the criminal investigator workload.

- (-$63.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CERCLA; EPCRA; Pollution Prosecution Act; Title 18 General Federal Crimes (e.g., false statements, conspiracy); Power of Environmental Protection Agency (18 U.S.C. 3063).

Enforcement Training
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$2,668.3	$3,145.0	$3,096.0	$3,043.0	($53.0)
Hazardous Substance Superfund	***$630.7***	***$840.0***	***$827.0***	***$858.0***	***$31.0***
Total Budget Authority / Obligations	$3,299.0	$3,985.0	$3,923.0	$3,901.0	($22.0)
Total Workyears	20.7	20.9	20.9	20.9	0.0

Program Project Description:

The Pollution Prosecution Act is the statutory mandate for the Agency's Enforcement Training program that provides environmental enforcement and compliance training nationwide through EPA's National Enforcement Training Institute (NETI). The program oversees the design and delivery of core and specialized enforcement courses that sustain a well-trained workforce to carry out the Agency's Superfund enforcement and compliance goals. Courses are provided to lawyers, inspectors, civil and criminal investigators, and technical experts at all levels of government.

NETI operates training facilities in Washington, D.C. and in Lakewood, CO. NETI also maintains a training center on the Internet, "NETI Online," which offers targeted technical training courses and the capability to track individual training plans. "NETI Online's" training information clearinghouse includes links to course offering lists, as well as tools for Agency training providers to assist with developing, managing, and evaluating the program's training.[7]

FY 2009 Activities and Performance Plan:

In FY 2009, NETI will develop and deliver training to address important gaps in Superfund-related enforcement and compliance assurance knowledge and skills identified in needs assessments and national strategic plans. The NETI advisory service will assist the Agency's enforcement experts in developing course agendas and in determining the most effective methods to deliver quality training to the nation's enforcement professionals.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement

[7] For more information, please refer to: http://www.epa.gov/compliance/training/neti/index.html

experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

One of the program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to extend the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$55.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$24.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PPA; RLBPHRA; RCRA; CWA; SDWA; CAA; EPCRA; TSCA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

Forensics Support
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance; Enhance Societies Capacity for Sustainability through Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$13,949.3	$15,075.0	$14,882.0	$15,557.0	$675.0
Hazardous Substance Superfund	***$2,805.2***	***$2,310.0***	***$3,750.0***	***$2,441.0***	***($1,309.0)***
Total Budget Authority / Obligations	$16,754.5	$17,385.0	$18,632.0	$17,998.0	($634.0)
Total Workyears	97.0	105.8	105.8	105.8	0.0

Program Project Description:

The Forensics Support program provides specialized scientific and technical support for the nation's most complex Superfund civil and criminal enforcement cases and provides technical expertise for non-routine Agency compliance efforts. EPA's National Enforcement Investigations Center (NEIC) is the only accredited environmental forensics center in the nation. NEIC's Accreditation Standard has been customized to cover the civil, criminal, and special program work conducted by the program.

NEIC collaborates with other Federal, state, local, and Tribal enforcement organizations to provide technical assistance, consultation, on-site inspection, investigation and case resolution activities in support of the Agency's civil enforcement program. In addition, the program coordinates with the Department of Justice and other Federal, state, and local law enforcement organizations to provide this type of science and technology support for criminal investigations.[8]

FY 2009 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2009 will include the refinement of "source-receptor" strategies to identify potential responsible parties' use of customized laboratory methods to solve unusual enforcement case challenges and applied research and development for both laboratory and field applications. In response to Superfund case needs, the NEIC will conduct applied research and development to identify and deploy new capabilities and to test and/or enhance existing methods and techniques involving environmental measurement and forensic situations. As part of this activity, NEIC also will evaluate the scientific basis and/or technical enforceability of select EPA regulations that may impact Superfund program activities.

[8] For more information, refer to: http://www.epa.gov/compliance/neic/index.html.

In FY 2009, the Forensics program will continue to function under more stringent International Standards Organization (ISO) requirements for environmental data measurements to maintain its accreditation. The program also will continue development of emerging technologies in field measurement and laboratory analytical techniques, as well as identifying sources of pollution at abandoned Superfund and other waste sites.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf)	890	500	890	890	Million pounds

One of the program measures, pounds of pollutants reduced, looks at the overall reduction in pollution as a result of enforcement actions. The Agency is exploring methodologies to strengthen the measure by analyzing the risk associated with the pollutants reduced. This may entail analysis of pollutant hazards and population exposure.

Estimated pollution reductions as a result of the enforcement actions taken by EPA have grown over the past five years. The last two years have seen actuals in the 890 M pounds range, and therefore our targets are being adjusted upward. However, one or two cases can have a significant effect on the end-of-year results. These estimates are projections made from future pollution reduction based on the settlement agreements entered during each specific fiscal year.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$159.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$1,492.0) This reduces a Congressionally-directed increase in the FY 2008.
- (+$24.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CERCLA; EPCRA.

Program Area: Homeland Security

Homeland Security: Critical Infrastructure Protection
Program Area: Homeland Security
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$9,555.5	$7,787.0	$7,665.0	$6,759.0	($906.0)
Science & Technology	$10,575.4	$25,586.0	$15,357.0	$27,131.0	$11,774.0
Hazardous Substance Superfund	***$1,637.2***	***$1,857.0***	***$1,828.0***	***$1,679.0***	***($149.0)***
Total Budget Authority / Obligations	$21,768.1	$35,230.0	$24,850.0	$35,569.0	$10,719.0
Total Workyears	53.7	59.0	59.0	49.0	-10.0

Program Project Description:

This program involves Superfund activities that coordinate and support protection of the nation's critical public infrastructure from terrorist threats. Through this program, EPA provides subject matter expertise and training support for terrorism-related environmental investigations to support responses authorized under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The program coordinates the Agency's law enforcement/crisis management activities and participates in Homeland Security Presidential Directives 5, 7, 8, and 10, while also having direct responsibilities pursuant to the National Response Plan (NRP), Emergency Support Functions 10 and 13, and the Oil and Hazardous Materials Annex.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to train all criminal investigators within the Office of Criminal Enforcement, Forensics and Training (OCEFT) in "Hot Zone Forensic Evidence Collection" typically utilized at crime scenes involving Weapons of Mass Destruction (WMD) as well as environmental crimes. The program will continue this multi-year effort to train and provide these agents with the necessary specialized response skills and evidence collection equipment. This will enable these agents to collect evidence and process a crime scene safely and effectively in a contaminated environment (hot zone).

Advanced crime scene processing training also will be provided to those criminal investigators assigned to the National Counter Terrorism Evidence Response Team (NCERT). NCERT will continue to provide environmental expertise for criminal cases and support the FBI and Department of Homeland Security (DHS) during select National Special Security Events (NSSE) and also will supply the required support as described in the various Emergency Support Functions (ESFs) of the National Response Plan (NRP) and National Response Framework (NRF) during a national emergency. Additionally, EPA agents in the homeland security program will provide more robust support, involving evidence collection, to the BioWatch,

Water Security Initiative, and RadNet programs. During FY 2009, it is anticipated that the number of NSSEs and other events to which EPA criminal investigators are deployed will remain high.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$42.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.

- (-1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

- (-$107.0) This change reflects small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CERCLA, as amended; Public Health Security and Bioterrorism Emergency and Response Act of 2002.

Homeland Security: Preparedness, Response, and Recovery
Program Area: Homeland Security
Goal: Land Preservation and Restoration
Objective(s): Restore Land

Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$3,394.3	$3,381.0	$3,329.0	$3,412.0	$83.0
Science & Technology	$39,003.6	$40,768.0	$38,193.0	$46,210.0	$8,017.0
Hazardous Substance Superfund	***$50,318.1***	***$45,280.0***	***$44,629.0***	***$56,676.0***	***$12,047.0***
Total Budget Authority / Obligations	$92,716.0	$89,429.0	$86,151.0	$106,298.0	$20,147.0
Total Workyears	166.7	167.6	167.6	174.2	6.6

Program Project Description:

EPA's Homeland Security Emergency Preparedness and Response program develops and maintains an agency-wide capability to respond to large-scale catastrophic incidents with emphasis on those that may involve Weapons of Mass Destruction (WMD). The program builds upon EPA's long-standing emergency response and removal program, which is responsible for responding to and cleaning up both oil and hazardous substance releases. EPA's homeland security effort expands these responsibilities to include threats associated with Chemical, Biological, and Radiological (CBR) agents. Over the next several years, the Agency will continue to focus on building the capacity to respond to multiple simultaneous large-scale catastrophic incidents. To meet this challenge, EPA will continue to use a comprehensive approach that brings together all emergency response assets to implement efficient and effective responses. Another priority for this program is improving research, development, and technical support for potential threats and response protocols.

FY 2009 Activities and Performance Plan:

In FY 2009, efforts to develop the capability to respond to multiple incidents will concentrate on four key areas: 1) maintaining a highly skilled, well-trained and equipped response workforce that can rise to the challenge of responding to simultaneous incidents as well as threats involving WMD substances; 2) continuing the development of decontamination options, methods, and protocols to ensure that the nation can quickly recover from nationally significant incidents; 3) operating and maintaining a nationwide environmental laboratory network capability to enhance coordination and standardization of laboratory support which includes expanding Agency Chemical Warfare Agent (CWA) fixed and field capabilities; and 4) implementing the EPA's

National Approach to Response (NAR) to effectively manage EPA's emergency response assets during large-scale activations. EPA activities in support of these efforts include the following:

- Develop and maintain the skills of EPA's On-Scene Coordinators (OSCs) through specialized training, exercises, and equipment. In FY 2009, EPA and its Federal, state, and local homeland response partners will continue to develop and participate in a wide range of exercises and trainings designed to test EPA's response capabilities. EPA will continue procurement of upgrades of specialized response equipment and will ensure maintenance of equipment purchased in prior years for OSCs.

- In an effort to strengthen its responder base during large-scale catastrophic incidents, EPA will provide training to volunteers of the Response Support Corps (RSC) and/or as part of an Incident Management Team (IMT). These volunteers provide critical support in Headquarters and Regional Emergency Operations Centers and in assisting with operations in the field. To ensure technical proficiency, this new cadre of response personnel requires initial training and yearly refresher training to include exercises, workshops, health and safety training, medical monitoring, and equipment acquisition, as necessary. EPA currently has about 800 trained RSC and IMT members and estimates it will need between 3,000 and 3,500 members to respond to five INS. The proposed funding will allow the Agency to train a minimum of 700 volunteers to meet RSC and IMT requirements.

- Continue to accelerate current efforts to build laboratory capacity and capability to analyze, verify, and validate CWA samples during an INS. The Agency will maintain and operate existing fixed CWA labs and Portable High-Throughput Integrated Laboratory Identification System (PHILIS) units. A recent analysis has shown a substantial gap between the Agency's current capacity and what may be needed to analyze chemical and biological warfare agents. To continue to make progress towards reducing that gap, EPA will purchase two additional PHILIS units to enhance the Agency's mobile analytical capability for CWA and also will award three additional grants and/or interagency agreements to state and/or Federal agencies for fixed CWA labs to increase capacity. Working with the Department of Homeland Security (DHS), the Department of Defense, and the states, EPA will implement standard operating procedures and standards of performance. The Agency will continue to actively participate with the Integrated Consortium of Laboratory Networks, maintaining and updating a laboratory compendium of Federal, state and commercial capabilities, and maintain a chemical surety program. EPA also will work with DHS to implement a competitive state grant for an All Hazards Receipt Facility.

- Headquarters and Regional Offices also will operate and maintain the Environmental Laboratory Response Network (eLRN) to provide lab analysis for routine and emergency response operations including a terrorist attack. In addition, in FY 2009, EPA plans to enhance the eLRN through the improvement of an electronic data deliverable for use by all eLRN laboratories.

- Continue to develop and validate environmental sampling, analysis, and human health risk assessment methods for known and emerging biological threat agents in accordance with Homeland Security Presidential Directive-10. These sampling and analysis methods are critical to ensuring appropriate response and recovery actions and developing necessary laboratory support capacity. The human health risk assessment methods also are extremely important to decision makers who are faced with determining when decontaminated facilities and equipment can be returned to service. This decontamination and consequence management research will produce data, information, and technologies to assist EPA in developing standards, protocols, and capabilities to recover from and mitigate the risks associated with biological attacks.

- Implement the NAR to maximize Regional interoperability and to ensure that EPA's OSCs will be able to respond to terrorist threats and large-scale catastrophic incidents in an effective and nationally consistent manner.

- Procure and operate an additional Airborne Spectral Photometric Environmental Collection Technology (ASPECT) plane. The ASPECT provides aerial assistance to first responders by rapidly collecting and processing chemical, visible, and radiological information quickly and relaying the information directly to the command structure during an INS. This technology has been used to assist the response community in over 50 incidents from ammonia releases to the recent Gulf Coast hurricanes. The existing ASPECT plane is located in the center of the country and takes a minimum of three hours to approach east and west coast targets which means any chemical or biological data collected from plume will not include critical environmental information near the time of the release. EPA proposes to locate the additional aircraft on the East Coast which will reduce response times for acquiring real-time monitoring capabilities in the Region and improve EPA's sampling and analysis efforts by expanding the geographic coverage.

- Develop the Rapidly Deployable Chemical Defense System (RDCDS) program, an interagency strategy to enhance the Airborne Spectral Photometric Environmental Collection Technology (ASPECT) program. RDCDS consists of both a ground and airborne component. The ground component is being developed at a national lab and the airborne component consists of the EPA ASPECT team. The RDCDS program will accelerate the development of an automated chemical compound identification. Automating compound identification involves the collection of field and laboratory data on individual chemical compounds. This data is then used to generate chemical compound filters which can be used in the rapid identification of the compound from the large data sets collected during a response. These data points can then be rapidly marked and geo-located by cross referencing to Global Positioning System (GPS) data sets. This development effort will significantly increase the speed with which chemicals can be identified, verified, mapped, and the data transmitted to first responders.

- Improve and enhance Agency systems to accept a wider variety of environmental data, including sampling, monitoring, hazardous debris and facilities reconnaissance, and to make these data easily and rapidly accessible for a variety of uses. Implementation of these activities will create a seamless data flow from the field and laboratory to the

various Incident Command System (ICS) units and to the general public. It also will improve EPA's ability to make rapid and accurate response decisions and to keep the public informed of health and environmental risks.

- Maintain and improve the Emergency Management Portal (EMP). FY 2009 will be the first year for complete integration of the basic management modules (i.e., environmental assessment, equipment, personnel, and decontamination). EPA will continue to manage, collect, and validate new information including the portfolio content for new and existing WMD agents as new decontamination techniques are developed or as other information emerges from the scientific community.

- Maximize the effectiveness of EPA's involvement in national security events through pre-deployments of assets such as emergency response personnel and field detection equipment. Pre-deployments allow immediate response should an incident occur at a national security event. EPA estimates it will participate in three pre-deployments in FY 2009.

- Conduct one WMD Decontamination Course for EPA OSCs, Special Teams, and Response Support Corp personnel to improve decontamination preparedness for biological, chemical, and radiological agents.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$633.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$3,500.0) This increase will allow EPA to accelerate efforts to build laboratory capacity and capability to analyze, verify, and validate samples during an INS. Funding will support two grants and/or IAGS to States and/or Federal agencies to build analytical capacity for chemical warfare agents and procure a PHILIS unit to enhance the Agency's mobile analytical capability for CWA.

- (+$2,200.0) This increase funds training for Response Support Corps and Incident Management Team volunteers who provide critical support in Headquarters and Regional Emergency Operations Centers and also assist with operations in the field during large-scale catastrophic incidents.

- (+$3,000.0) This increase funds the procurement of an additional Airborne Spectral Photometric Environmental Collection Technology (ASPECT) airplane to be located on the East Coast which will reduce the response time for acquiring real-time monitoring capabilities during large-scale catastrophic incidents.

- (+$500.0) This increase will improve and enhance emergency response data systems to allow for a seamless data flow from the field and laboratory to Incident Command System units and to the general public.

- (+$1,460.0) This increase will fund Regional homeland security training opportunities, participation at agency and interagency exercises designed to better prepare for a large-scale catastrophic incident, and associated travel to support the Regions' emergency response duties.

- (+$754.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. This increase will support Regional emergency preparedness activities.

Statutory Authority:

CERCLA Sections 104, 105, 106; Clean Water Act; Oil Pollution Act.

Homeland Security: Protection of EPA Personnel and Infrastructure

Program Area: Homeland Security
Goal: Land Preservation and Restoration
Objective(s): Restore Land

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$6,219.1	$6,345.0	$6,248.0	$6,415.0	$167.0
Science & Technology	$2,023.9	$594.0	$585.0	$594.0	$9.0
Building and Facilities	$10,372.2	$7,870.0	$7,747.0	$8,070.0	$323.0
Hazardous Substance Superfund	***$636.7***	***$594.0***	***$585.0***	***$1,194.0***	***$609.0***
Total Budget Authority / Obligations	$19,251.9	$15,403.0	$15,165.0	$16,273.0	$1,108.0
Total Workyears	2.3	3.0	3.0	3.0	0.0

Program Project Description:

This program involves activities to ensure that EPA's physical structures and assets are secure and operational and that certain physical security measures are in place to help safeguard staff in the event of an emergency. The program also includes the personnel security clearance process, protecting any classified information, and providing necessary secure communications.

FY 2009 Activities and Performance Plan:

EPA will continue to update its physical security vulnerability assessments and also continue the mitigation of medium vulnerabilities at the Agency's most sensitive facilities. The Agency will conduct exercises of Continuity of Operations (COOP) plans, activation of essential personnel to the COOP site, and implementation of its essential functions from its remote alternate site(s), including interagency operations. In FY 2009, EPA plans to support training activities and to participate in a major interagency COOP exercise (Pinnacle/Forward Challenge) and an EPA internal COOP exercise with Headquarters and the Regions. Also in FY 2009, EPA requests increased resources to accelerate plans to work toward meeting the requirements of National Communications System Directive (NCSD) 3-10, through the purchase, installation, and maintenance of secure communications equipment for primary and alternate Headquarters COOP sites.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$600.0) This increase will support the purchase, installation, and maintenance of secure communications equipment at primary and alternate Headquarters COOP sites.

- (+$9.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

Public Health Security and Bioterrorism Emergency and Response Act of 2002; CERCLA; Public Law 104-12 (Nunn-Lugar II); National Response Plan; National Security Act of 1947, as amended (50 U.S.C. 401 et seq.).

Program Area: Information Exchange / Outreach

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$49,193.3	$49,747.0	$48,971.0	$49,756.0	$785.0
Hazardous Substance Superfund	***$137.5***	***$155.0***	***$154.0***	***$0.0***	***($154.0)***
Total Budget Authority / Obligations	$49,330.8	$49,902.0	$49,125.0	$49,756.0	$631.0
Total Workyears	375.7	379.1	365.5	372.4	6.9

Program Project Description:

The Enforcement and Compliance Assurance program contributed to the mission of this program by disseminating information about Superfund-related enforcement actions, compliance monitoring, and the availability of compliance assistance. Some of the tools used to inform stakeholders included: monthly Enforcement Alerts, regular news briefs about enforcement and compliance assistance activities, and a website with easily accessible tools for retrieving information.

FY 2009 Activities and Performance Plan:

The Enforcement and Compliance Assurance program will not be requesting funding in FY 2009 for the Congressional, Intergovernmental, External Relations program. Instead, the program will redirect these functions to the compliance incentives program in the EPM appropriation and the Superfund: Enforcement program in the Superfund appropriation. Program functions that will be redirected include information updates on enforcement actions, compliance monitoring, and the availability of compliance assistance. Additionally, some of the tools used to inform stakeholders that also will be redirected as a part of the program include: monthly Enforcement Alerts, regular news briefs about enforcement and compliance assistance activities, and a website with easily accessible tools for retrieving information.

Performance Targets:

The emphasis and priority of the program is to provide the vision and leadership for the full range of EPA's mission. In addition to headquarters efforts, the Regional Administrators and their staffs continue to provide leadership to their respective regional offices and the states they

serve. These tools assist in building a greater understanding of CERCLA and Superfund related issues for the enforcement program's many stakeholders. The Congressional, Intergovernmental, External Relations program project supported this effort.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$128.0 / -1.1 FTE) This reduction will redirect Superfund resources that have been used to disseminate information about various enforcement-related events and milestones. The functions of the Superfund portion of this program will not be eliminated and will be redirected for administrative efficiency to the compliance incentives program in the Environmental Program and Management appropriation and the Superfund Enforcement program in the Hazardous Substance Superfund appropriation.

- (-$26.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs

Statutory Authority:

Annual Appropriations Act; Federal Advisory Committee Act; Enterprise for the Americas Initiative Act; North America Free Trade Agreement Implementation Act; RLBPHRA; NAAED; LPA-US/MX-BR; CERCLA.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$17,541.7	$15,364.0	$15,137.0	$18,058.0	$2,921.0
Hazardous Substance Superfund	***$1,374.2***	***$1,433.0***	***$1,411.0***	***$1,433.0***	***$22.0***
Total Budget Authority / Obligations	$18,915.9	$16,797.0	$16,548.0	$19,491.0	$2,943.0
Total Workyears	30.0	24.0	24.0	24.0	0.0

Program Project Description:

This program supports the development and maintenance of the National Environmental Information Exchange Network (the Exchange Network). The Exchange Network is an integrated information network using standardized data formats and definitions to facilitate information sharing among EPA and its partners across the Internet. This program provides resources to develop, implement, operate, and maintain the Agency's Central Data Exchange (CDX, www.epa.gov/cdx), EPA's node on the Exchange Network, which is the point of entry for data submissions to the Agency and data exchanges with our partners. This program also develops the regulatory framework to ensure that electronic submissions are legally acceptable; establishes partnerships with states, tribes, territories and Tribal consortia; and, supports the e-Government (e-Gov) initiatives such as e-Rulemaking, e-Authentication, electronic information management, and data standards.

FY 2009 Activities and Performance Plan:

In FY 2009, the major focus is on fulfilling the Agency's e-Gov commitments and supporting EPA's information technology initiatives. These activities build on efforts started in FY 2004 to enhance the availability, quality, and analytical usefulness of environmental information for EPA and its partners and stakeholders. These efforts support data exchange by states, tribes, and other partners through the use of the Exchange Network and CDX.

After 2007, all 50 states, one territory, and seven tribes will have nodes on the Exchange Network and will be using it to send data to EPA and share data with other partners. In FY 2009, EPA, states, as well as more tribes and territories, will continue to re-engineer data systems so information that was previously not available, or not easily available, can be exchanged using common data standards and data formats called schemas. These efforts will be closely

coordinated with the Agency's program offices and the Agency's system of data registries. As data flows are added, the broader use of data standards (quality tools that check data before it is submitted) and reusable schemas will increase the accuracy and timeliness of the data, improve analytical capabilities, and create savings through economies of scale.

In addition, EPA will improve data security by implementing electronic reporting standards that support the authentication and electronic signatures of report submitters. EPA will work to provide assistance to states, tribes and territories in implementing these standards. Effective implementation of the Exchange Network activities relies on close coordination with the Information Security, Agency Architecture, and data management activities. Coordination helps to ensure that necessary security measures are adhered to, system platforms follow the Agency's Enterprise Architecture, and data management follows documented standards.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	37	36	45	60	Systems

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	88,516	55,000	100,000	110,000	Users

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$22.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FACA; GISRA; CERCLA; CAA and amendments; CWA and amendments; ERD & DAA; TSCA; FIFRA; FQPA; SDWA; and amendments; FFDCA; EPCRA; CERCLA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: IT / Data Management / Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$4,291.9	$5,583.0	$5,504.0	$5,790.0	$286.0
Hazardous Substance Superfund	***$562.3***	***$792.0***	***$780.0***	***$801.0***	***$21.0***
Total Budget Authority / Obligations	$4,854.2	$6,375.0	$6,284.0	$6,591.0	$307.0
Total Workyears	10.2	15.8	15.8	15.8	0.0

Program Project Description:

The Information Security program protects the confidentiality, availability, and integrity of EPA's information assets. This program also establishes a risk-based cyber security program using a defense-in-depth approach that includes partnering with other Federal agencies and the states; implements aggressive efforts to respond to evolving threats and computer security alerts and incidents, and integrates information security into its day-to-day business; manages the Federal Information Security Management Act (FISMA) data collection and reporting requirements; and supports the development, implementation and operation and maintenance of the ASSERT security documentation system.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue its technical and system analyses evaluations and assessments to maintain the security of EPA's information. Constant system and network monitoring is essential to detect and identify potential weaknesses or vulnerabilities that might otherwise compromise EPA's information assets. These proactive efforts allow EPA to develop cost effective solutions that bolster EPA's long-term goal of building analytical capacity. EPA will also coordinate information security activities with the Homeland Security IT, Exchange Network and IT/Data Management program requirements and, where possible, identify and implement more efficient solutions.

Effective information security is a constantly moving target. Every year, Agency managers are challenged with responding to increasingly creative and sophisticated attempts to breach organizational protections. The goal of the Agency's Information Security program is to effectively protect the confidentiality, availability, and integrity of EPA's information assets

amid the evolving risks that are present in a fully networked world. The Agency's Information Security program uses a defense-in-depth approach that includes partnering with other Federal agencies and states, integrating information security into day-to-day business operations, and aggressively responding to evolving threats and computer security alerts and incidents. The program is based on a successful implementation of the Federal Risk Management Framework mandated by the Federal Information Security Management Act (FISMA). This is a collective effort to harden the Agency's diverse and distributed IT environments in accordance with federal security standards.

The foundation for the Federal Risk Management Framework is a requirement that Agency managers understand the protection requirements of the information they use while fulfilling the Agency's mission operations. Based upon that understanding, managers must ensure appropriate federal security standards are implemented, that security standard decisions are documented, and, most importantly, that implementation is rigorously monitored to ensure the protection remains effective. The Information Security program assists Agency managers in implementing these requirements as well as preparing and providing periodic mandated reports to the Office of Management and Budget (OMB) and Congress. Failing to securely manage Agency information and information systems could severely disrupt the Agency's ability to fulfill its environmental mission. A breach of confidentiality, such as a release of sensitive personally identifiable information (PII), could do significant harm to individuals as well as impacting the Agency's budgetary decisions and harming the Agency's credibility. Breaches of integrity and availability could severely impact confidence in the reliability of Agency information. If such breaches accompanied an emergency of some kind, it would negatively affect the Agency's emergency response.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	Percent

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$14.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$7.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

FISMA; GPRA; GMRA; CCA; PRA; FOIA; PR; EFOIA.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Science & Technology	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Leaking Underground Storage Tanks	$136.5	$177.0	$174.0	$162.0	($12.0)
Oil Spill Response	$23.8	$34.0	$33.0	$24.0	($9.0)
Hazardous Substance Superfund	***$15,975.5***	***$16,338.0***	***$16,083.0***	***$16,872.0***	***$789.0***
Total Budget Authority / Obligations	$119,854.2	$111,067.0	$110,496.0	$115,277.0	$4,781.0
Total Workyears	497.4	488.0	488.0	488.0	0.0

Program Project Description:

Agency offices rely on the IT/Data Management Superfund program and its capabilities to develop and implement tools for ready access to accurate and timely data. This program houses all of the critical IT infrastructure that allows efficient exchange and storage of data, analysis and computations. It also allows access to the scientific, regulatory, and best practice information needed by agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the offices of Research and Development (ORD) and Air and Radiation (OAR) to access scientific and program data. Because the IT/Data Management function supports the entire Agency, funds are provided in each operating appropriation including Superfund.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal. The program: (1) supports the development, collection, management, and analysis of environmental data (to include both point source and ambient data) to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access; (3) manages the

Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines; and (4) supports Regional information technology infrastructure, administrative and environmental programs, and telecommunications.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Information Technology community will continue to focus on improving the Agency's use of technology, pursuing enterprise solutions, and protecting privacy and security of data holdings while improving delivery of information and services to partners and citizens. The Agency's IT/Data Management program forms the core of this effort with its focus on building and implementing the Agency's Integrated Portal and Enterprise Content Management System (ECMS), developing Environmental Indicators, and continuing to deploy enterprise-wide IT infrastructure solutions.

The Environmental Information program's FY 2009 technology efforts have three major components:

- OEI's efforts in the areas of Analytical Capacity and Indicators is expected to help identify data gaps, and suggest areas where additional capacity is needed;
- Through use of the portal and Exchange Network, the Technology Initiative program will increase the integration of quality data, streamline transactions to foster collaboration, reduce the data entry burden, and improve decision making;
- OEI's Readiness to Serve initiative will build the capacity and infrastructure needed to allow more EPA employees to telecommute or work safely and securely in the field.

Feedback and results received during stakeholder meetings on EPA's FY 2003 "Draft Report on the Environment" identified key areas for data collection, review and analysis. EPA's technology efforts and its focus areas work together to advance data analyses and the development of an analytical tool kit, including environmental indicators. These efforts will be reflected in the next "Report on the Environment." That document has two major components, the science document and the summary document, both of which are expected to be released to the public in mid-2008.

Technology efforts in FY 2009 for EPA's Integrated Portal activities include implementing identity and access management solutions, and integrating geospatial tools. The Portal is the Technology Initiative's link to diverse data sets and systems giving users the ability to perform complex environmental data analyses on data stored at other locations. It provides a single business gateway for people to access, exchange and integrate standardized local, regional and national environmental and public health data.

Using a collaborative process, the Agency will continue to implement the ECMS project, an enterprise-wide, multi-media solution designed to manage and organize environmental data and documents for EPA, Regions, field offices and laboratories. Previously fragmented data storage approaches will be converted, over time, into a single resource on a standard platform which is

accessible to everyone in the Agency, reducing data and document search time and assisting in security and information retention efforts.

EPA's infrastructure program will continue to deliver secure information services to ensure that the Agency and its programs have a full range of information technology infrastructure components (e.g., user equipment, network connectivity, e-mail, application hosting, and remote access) that make information accessible across the spectrum of mission needs at all locations. The program uses performance-based, outsourced services to obtain the best solutions (value for cost) for the range of program needs. This includes innovative multi-year leasing that sustains and renews technical services in a least-cost, stable manner as technology changes over time (e.g., desktop hardware, software and maintenance). Physical infrastructure is a challenge because demands on bandwidth increase as system capabilities and public users grow.

EPA's environmental information needs require the Agency to ensure that it is keeping pace with the states in the areas of data collection, management and utilization. Additionally, this program will continue to focus on information security and the need for each regional office to have an internal IT security capacity. The regional offices will implement Agency information resource management policies in areas such as data and technology standards, central data base services, and telecommunications.

In FY 2009, EPA continues active participation in nine government-wide E-government initiatives and six Lines of Business. Through these projects, EPA will implement consolidated practices used to manage information technology, improve access and tools for analysis of environmental information, create new approaches to allow citizens and businesses to more directly participate in Agency rulemaking activities, and develop enterprise solutions for our internal business practices. EPA contributions to the initiatives are intended to ensure efficiency, economy, and security in federal IT investments and systems used by federal employees, partners, stakeholders and citizens.

IT/Data Management efforts are integral to the Exchange Network and Information Security programs. Together these programs work to design, develop and deploy secure systems and analytical tools to promote sound environmental decision-making.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$309.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$380.0) This increase reflects a restoration of funds that were reduced in this program in FY 2008 for anticipated Agency-wide IT/infrastructure savings pending analysis of final costing. The Agency has completed its analysis and reduced its estimate of the

savings associated with changes to IT/infrastructure. Funding changes have been incorporated across the board for FY 2009 IT/infrastructure costs.

- (+$100.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs

- (+0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD, and DAA; TSCA; FIFRA; FQPA; SDWA and amendments; FFDCA; EPCRA; RCRA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: Legal / Science / Regulatory / Economic Review

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$970.5	$1,175.0	$1,160.0	$1,264.0	$104.0
Hazardous Substance Superfund	***$1,020.6***	***$837.0***	***$825.0***	***$846.0***	***$21.0***
Total Budget Authority / Obligations	$1,991.1	$2,012.0	$1,985.0	$2,110.0	$125.0
Total Workyears	6.6	7.3	7.3	7.3	0.0

Program Project Description:

The General Counsel and Regional Counsel Offices provide environmental Alternative Dispute Resolution services (ADR). Funding supports the use of ADR in the Superfund program's extensive legal work with Potentially Responsible Parties (PRPs).

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will provide conflict prevention and ADR services to EPA Headquarters and Regional offices and external stakeholders on environmental matters. The national ADR program assists in developing effective ways to anticipate, prevent, and resolve disputes and makes neutral third parties – such as facilitators and mediators – more readily available for those purposes. Under EPA's ADR Policy, the Agency encourages the use of ADR techniques to prevent and resolve disputes with external parties in many contexts, including adjudications, rulemaking, policy development, administrative and civil judicial enforcement actions, permit issuance, protests of contract awards, administration of contracts and grants, stakeholder involvement, negotiations, and litigation.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$51.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$30.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

EPA's General Authorizing Statutes.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$38,242.4	$39,366.0	$39,480.0	$39,925.0	$445.0
Hazardous Substance Superfund	***$826.8***	***$606.0***	***$740.0***	***$631.0***	***($109.0)***
Total Budget Authority / Obligations	$39,069.2	$39,972.0	$40,220.0	$40,556.0	$336.0
Total Workyears	240.8	247.2	247.2	247.2	0.0

Program Project Description:

The Agency's General Counsel and Regional Counsel Offices provide legal representational services, legal counseling and legal support for all Agency environmental activities. Funding supports the use of legal advice in the Superfund programs extensive legal work with Potentially Responsible Parties (PRPs) and other entities and landowners involved in the program.

FY 2009 Activities and Performance Plan:

In FY 2009, legal advice to environmental programs will include litigation support representing EPA and providing litigation support in cases where EPA is a defendant, as well as those cases where EPA is not a defendant, but may have an interest in the case. Legal advice, counsel, and support are necessary for Agency management and program offices on matters involving environmental issues including, for example, providing interpretations of, and drafting assistance on, relevant and applicable laws, regulations, directives, policy and guidance documents, and other materials.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$115.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$224.0) This change reflects restoration of the 1.56% rescission to all program projects combined with several changes in IT, travel or other support costs.

Statutory Authority:

EPA's General Authorizing Statutes.

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Science & Technology	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Building and Facilities	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Leaking Underground Storage Tanks	$848.5	$901.0	$887.0	$902.0	$15.0
Oil Spill Response	$500.4	$490.0	$488.0	$496.0	$8.0
Hazardous Substance Superfund	***$70,265.0***	***$74,956.0***	***$73,787.0***	***$76,270.0***	***$2,483.0***
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

Superfund resources in the Facilities Infrastructure and Operations Program Project are used to fund rent, utilities, security, and also to manage activities and support services in many centralized administrative areas at EPA. These include health and safety, environmental compliance, occupational health, medical monitoring, fitness/wellness, and environmental management functions. Resources for this program also support a full range of ongoing facilities management services, including facilities maintenance and operations; Headquarters security; space planning; shipping and receiving; property management; printing and reproduction; mail management; and transportation services. Because this program supports the entire Agency, funds are included in most appropriations.

FY 2009 Activities and Performance Plan:

For FY 2009, the Agency is requesting a total of $45,353 thousand for rent; $3,042 thousand for utilities; $6,524 thousand for security; $2,226 thousand for transit subsidy; and $2,505 thousand for regional moves in the Superfund appropriation. The Agency also will continue to manage its lease agreements with General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct. The Agency also reviews space needs on a regular basis.

These resources also help to improve operating efficiency and encourage the use of new, advanced technologies and energy sources. EPA will continue to direct resources toward acquiring alternative fuel vehicles and more fuel-efficient passenger cars and light trucks to meet the goals set by Executive Order (EO) 13423[9], *Strengthening Federal Environmental, Energy, and Transportation Management*. Additionally, the Agency will attain the EO's goals through several initiatives, including comprehensive facility energy audits; re-commissioning; 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; green power purchases; and the use of Energy Star rated products and buildings.

EPA will provide transit subsidy to eligible applicants as directed by EO 13150[10] *Federal Workforce Transportation.* EPA will continue its integration of Environmental Management Systems (EMS) across the Agency, consistent with requirements of EO 13423[11]. EPA will advance the implementation of Safety and Health Management Systems to identify and mitigate potential safety and health risks in the workplace. EPA will continue to provide safety, health, and environmental services that help maintain EPA's readiness to respond to national emergencies—protecting its employees and responsibly managing the environmental and safety hazards of samples associated with weapons of mass destruction.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$545.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$83.0) This represents an increase in resources for transit subsidy.
- (+$1,058.0) This increase will provide additional resources for projected increases in rent. The total includes the restoration of the 1.56% recession to all program projects.
- (+$614.0) This increase will provide additional resources for projected increases in utility costs. The total includes the restoration of the 1.56% recession to all program projects.
- (-$137.0) This decrease reflects projected security cost savings in FY 2009.
- (+$320.0) This reflects the balance of the restored 1.56% rescission to all program projects to fund other operations support costs.

[9] Information available at http://www.fedcenter.gov/programs/eo13423/
[10] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html
[11] Information available at http://www.fedcenter.gov/programs/eo13423/

- (+3.5 FTE) This reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

Federal Property and Administration Services Act; Public Building Act; Annual Appropriations Act; Robert T. Stafford Disaster Relief and Emergency Assistance Act; CWA; CAA; RCRA; TSCA; NEPA; CERFA; D.C. Recycling Act of 1988; EPACT of 2005; Executive Orders 10577, 12598, 13150 and 13423; Emergency Support Functions (ESF) #10 Oil and Hazardous Materials Response Annex; Presidential Decision Directive 63 (Critical Infrastructure).

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$20,564.5	$23,439.0	$23,242.0	$25,977.0	$2,735.0
Hazardous Substance Superfund	***$2,671.4***	***$3,049.0***	***$3,001.0***	***$3,116.0***	***$115.0***
Total Budget Authority / Obligations	$23,235.9	$26,488.0	$26,243.0	$29,093.0	$2,850.0
Total Workyears	169.2	177.5	177.5	177.5	0.0

Program Project Description:

Grants and Interagency Agreements comprise more than half of the Agency's budget. Superfund resources in this program support activities related to the management of Financial Assistance Grants/Interagency Agreements (IAGs), and of suspension and debarment at Headquarters and within Regional offices. The key components of this program are ensuring that EPA's management of grants and IAGs meets the highest fiduciary standards, and that grant funding produces measurable environmental results. This program focuses on maintaining a high level of integrity in the management of EPA's assistance agreements, and fostering relationships with state and local governments to support the implementation of environmental programs. Sound grants management fosters efficiency and effectiveness assisting all of EPA's programs. A portion of the Superfund program is implemented through IAGs with the U.S. Army Corps of Engineers and the Coast Guard.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will achieve key objectives under its long-term Grants Management Plan. These objectives include strengthening accountability, competition and positive environmental outcomes, and aggressively implementing new and revised policies on at-risk grantees.[12] The Grants Management Plan has provided a framework for extensive improvements in grants management at the technical administrative level, programmatic oversight level and at the executive decision-making level of the Agency. EPA will continue to reform grants management by conducting on-site and pre-award reviews of grant recipients and applicants,

[12] US EPA, *EPA Grants Management Plan.* EPA-216-R-03-001, April 2003, http://www.epa.gov/ogd/EO/finalreport.pdf.

performing indirect cost rate reviews, providing Tribal technical assistance, and implementing its Agency-wide training program for project officers, grant specialists, and managers.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from the FY 2008 Enacted Budget (Dollars in Thousands):

- (+$115.0) This reflects an increase for payroll and cost of living for existing FTE combined with the restoration of the 1.56% rescission to all program projects.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; Federal Grant and Cooperative Agreement Act; Section 40 Code of Federal Regulations, Parts: 30, 31, 35, 40, 45, 46, and 47.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$23,654.1	$29,992.0	$28,629.0	$31,195.0	$2,566.0
Leaking Underground Storage Tanks	$223.1	$165.0	$162.0	$165.0	$3.0
Hazardous Substance Superfund	***$19,129.3***	***$24,645.0***	***$24,327.0***	***$24,985.0***	***$658.0***
Total Budget Authority / Obligations	$43,006.5	$54,802.0	$53,118.0	$56,345.0	$3,227.0
Total Workyears	340.9	357.3	357.3	362.9	5.6

Program Project Description:

Sound contract management fosters efficiency and effectiveness assisting all of EPA's programs. Superfund resources in this program support contract and acquisition management at Headquarters, Regional Offices, Research Triangle Park and Cincinnati facilities. Much of the Superfund program is implemented through contracts. EPA focuses on maintaining a high level of integrity in the management of its procurement activities and fostering relationships with state and local governments to support the implementation of environmental programs.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to implement its new acquisition system, scheduled to be deployed in FY 2010. The current Acquisition Management System has reached the end of its useful life. Staff increasingly spends time making the system work as opposed to using the system to accomplish their work. Further, the system itself is obsolete; and therefore an upgrade is not cost-efficient.

The new system will provide the Agency with a better, more comprehensive way to manage data on contracts that support mission-oriented planning and evaluation. This will allow the Agency to reach the President's Management Agenda (PMA) goals, E-Government (E-Gov) requirements, and the needs of Agency personnel, resulting in more efficient process implementation. The benefits of the new system are: (1) program offices will be able to track the progress of individual actions; (2) extensive querying and reporting capabilities will allow the Agency to meet internal and external demands, and (3) the system will integrate with the Agency's financial systems and government-wide shared services.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,061.0) This reflects an increase for payroll and cost of living for existing FTEs.

- (-$403.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to several technical changes such as realignment of IT, travel and other support costs across programs.

- (-4.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources such as Regional contract management workload, skills and Agency priorities.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; contract law.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$39,740.2	$40,175.0	$39,760.0	$43,646.0	$3,886.0
Leaking Underground Storage Tanks	$3.0	$3.0	$3.0	$3.0	$0.0
Hazardous Substance Superfund	***$5,203.0***	***$5,036.0***	***$4,969.0***	***$5,063.0***	***$94.0***
Total Budget Authority / Obligations	$44,946.2	$45,214.0	$44,732.0	$48,712.0	$3,980.0
Total Workyears	298.6	296.3	296.3	304.6	8.3

Program Project Description:

Superfund resources in this program support activities related to the provision of human capital and human resources management services to the entire Agency. EPA supports organizational development and management activities through Agencywide and interagency councils and committees, and through participation in interagency management improvement initiatives. The Agency continually evaluates and improves Superfund-related human resource and workforce functions, employee development, leadership development, workforce planning, and succession management.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue its efforts to strengthen its workforce by focusing on key areas to further develop our existing talent, and by strengthening our recruitment and hiring programs. EPA also remains committed to fully implementing EPA's *Strategy for Human Capital* [13], which was issued in December 2003 and updated in 2005. As a result of that review, the desired outcomes for each strategy were strengthened to focus on measurable results. In FY 2009, the Agency will continue its multi-year efforts to implement a Workforce Planning System:

- Closing competency gaps for Toxicology, Information Technology, Human Resources, Grant and Contract specialist positions, as well as leadership positions throughout the Agency.

[13] US EPA, *Investing in Our People II, EPA's Strategy for Human Capital.* Available at http://www.epa.gov/oarm/strategy.pdf

- Shortening the hiring timeframes for the Senior Executive Service (SES) and non-SES positions through improved automation and enhancements to application process.
- Implementing innovative recruitment and hiring flexibilities that address personnel shortages in mission-critical occupations.

As part of these activities, EPA will improve the effectiveness and efficiency of Agency human resources operations by establishing Shared Service Centers. These Shared Service Centers will process personnel and benefits actions for EPA's 17,000 employees, as well as vacancy announcements. The establishment of Human Resources Shared Service Centers reflects EPA's ongoing commitment to improve the effectiveness and efficiency of Agency operations. The Centers will enhance the timeliness and quality of customer service and standardize work processes.

In addition, EPA will continue to streamline human resources management by employing the E-gov initiative, Human Resources Line of Business (HR LoB). HR LoB offers government-wide, cost effective, standardized and interoperable HR solutions while providing core functionality to support the strategic management of Human Capital.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$77.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$17.0) This change reflects restoration of the 1.56% rescission to all program projects combined with several technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Title V USC; FAIR Act.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$64,431.2	$74,960.0	$73,949.0	$80,623.0	$6,674.0
Leaking Underground Storage Tanks	$812.6	$1,102.0	$1,085.0	$1,131.0	$46.0
Hazardous Substance Superfund	***$20,428.7***	***$24,306.0***	***$24,008.0***	***$26,102.0***	***$2,094.0***
Total Budget Authority / Obligations	$85,672.5	$100,368.0	$99,042.0	$107,856.0	$8,814.0
Total Workyears	519.9	530.0	530.0	538.1	8.1

Program Project Description:

EPA's financial management community maintains a strong partnership with the Superfund program. The Office of the Chief Financial Officer (OCFO) recognizes and supports this continuing partnership by providing a full array of financial management support services necessary to pay Superfund bills and recoup cleanup and oversight costs for the Trust Fund. OCFO manages Superfund budget formulation, justification, and execution as well as financial cost recovery. OCFO also manages oversight billing for Superfund site cleanups (cost of overseeing the responsible party's cleanup activities), Superfund cost documentation (the Federal cost of cleaning up a Superfund site), and refers delinquent accounts receivable and oversight debts to the Department of Justice for collection. (Refer to http://www.epa.gov/ocfo/functions.htm for more information).

FY 2009 Activities and Performance Plan:

The Agency works to ensure sound financial and budgetary management though the use of routine and ad hoc analysis, statistical sampling and other evaluation tools. In addition, more structured and more targeted use of performance measurements has led to better understanding of program impacts as well as leverage points to increase effectiveness.

EPA will continue efforts to modernize the Agency's financial systems and business processes. The Agency is working to replace its legacy accounting system and related modules with a new system certified to meet the latest government accounting standards. This extensive modernization effort will allow the Agency to improve efficiency and automate quality control functions to simplify use of the system as well as comply with Congressional direction and new

Federal financial systems requirements. This work is framed by the Agency's Enterprise Architecture and will make maximum use of enabling technologies for e-Gov initiatives including e-Procurement, e-Payroll, and e-Travel.

EPA plans further improvements to its budgeting and planning system, financial data warehouse, business intelligence tools, and reporting capabilities. These improvements will support EPA's "green" score in financial performance on the President's Management Agenda (PMA) scorecard by providing more accessible data to support accountability, cost accounting, budget and performance integration, and management decision-making.

In FY 2009, EPA will continue to strengthen its accountability and effectiveness of operations through improved coordination and integration of internal control assessments as required under Revised OMB Circular A-123. Improvements in internal controls will further support EPA's PMA initiatives for improved financial performance.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$669.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$880.0) This increase is to cover revised estimates of the expected FY 2009 expenditures for the Financial Replacement System (FinRS) Capital Investment project.

- (-$45.0) This decrease realigns funds between Central Planning, Budgeting and Finance and Superfund Enforcement/Cost Recovery in the FY 2009 President's Budget. These funds support financial cost recovery activities.

- (+$590.0) This change reflects restoration of the 1.56% rescission to all program projects combined with small technical changes such as realignment of IT, travel, or other support costs across programs. The restored funds will support continuity in provision of the financial services for the Agency and baseline financial systems operations.

- (-0.3 FTE) The change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

Annual Appropriations Act; CCA; CERCLA; CSA; E-Government Act of 2002; EFOIA; EPA's Environmental Statutes, and the FGCAA; FAIR; Federal Acquisition Regulations, contract law and EPA's Assistance Regulations (40CFR Parts 30, 31, 35, 40,45,46, 47); FMFIA(1982);

FOIA; GMRA(1994); IPIA; IGA of 1978 and Amendments of 1988; PRA; PR; CFOA (1990); GPRA (1993); The Prompt Payment Act (1982); Title 5 USC.

Program Area: Research: Human Health And Ecosystems

Human Health Risk Assessment
Program Area: Research: Human Health and Ecosystems
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$35,018.0	$38,856.0	$38,334.0	$39,323.0	$989.0
Hazardous Substance Superfund	***$3,926.4***	***$3,972.0***	***$3,910.0***	***$3,325.0***	***($585.0)***
Total Budget Authority / Obligations	$38,944.4	$42,828.0	$42,244.0	$42,648.0	$404.0
Total Workyears	176.3	182.1	182.1	178.6	-3.5

Program Project Description:

The Human Health Risk Assessment (HHRA) program provides health hazard assessments and develops assessment methods. It supports Superfund in the following areas:

The Integrated Risk Information System (IRIS)[14], Provisional Peer-Reviewed Toxicity Values (PPRTVs), and other health hazard assessments: Based on the expressed needs of EPA's Solid Waste and Emergency Response program, this program prepares IRIS hazard characterization and dose-response profiles for environmental pollutants of specific relevance to site assessments and remediation. Where IRIS values are unavailable, the HHRA program develops PPRTVs for evaluating chemical specific exposures at Superfund sites. Support for these PPRTV assessments is provided through the Superfund Technical Support Centers.

Risk assessment guidance, methods, and model development: Improving risk assessment guidance, methods, and models to support Superfund includes the development of exposure-response data arrays, revised RfC methodology and cumulative risk tools to better estimate potential effects of exposures at Superfund sites on humans and the consultative support necessary for the application of these methods.

Superfund research is guided by the long term *Waste Research Strategy*[15], which was developed with participation from major clients and outlines research needs and priorities. These research efforts are guided by multi-year plans (MYPs)[16], developed with input from across the Agency, including scientific staff in the Superfund program and the Regional offices. The MYPs outline

[14] Available at: http://www.epa.gov/iris.
[15] U.S. EPA, Office of Research and Development, *Waste Research Strategy*. Washington, D.C.: EPA. For more information, see http://www.epa.gov/ord/htm/documents/wastepub.pdf.
[16] For more information, see http://www.epa.gov/osp/myp.
The *Waste Research Strategy* outlines the research needs and priorities at the time it was prepared. To guide these research efforts as progress is made and new needs emerge, EPA develops multi-year research plans that are revised periodically. EPA is currently merging the Contaminated Sites and RCRA Multi-Year Plans (MYPs) into one cohesive Land Research MYP, with input from across the Agency, to ensure research conducted continues to support the Agency's mission to protect human health and the environment.

steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures. Application of the research results and existing published scientific information to risk assessment needs is described in the HHRA MYP[17].

In FY 2003, a Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—subcommittee review found that the National Center for Environmental Assessment (NCEA) had made several key advancements including completion of a strategic plan, targeting cutting-edge risk assessments, enhancing communication, and improving capabilities to provide environmental assessments resources in response to significant events. A subsequent BOSC subcommittee program review began in November 2007. This prospective and retrospective review is evaluating the program's relevance, quality, performance, and scientific leadership. The BOSC's evaluation and recommendations will provide guidance to EPA to help plan, implement, and strengthen the program over the next five years.

FY 2009 Activities and Performance Plan:

In FY 2009, the HHRA program (FY 2009 Request, $3.3 million) will continue to directly support key elements of EPA's Strategic Plan relating to Superfund - particularly the characterization of risks, reduction of contaminant exposures, and cleanup of contaminated sites (FY 2009 Request, $3 million). Risk assessment activities relevant to Superfund cleanups will include:

- Continuing to work toward the completion of IRIS health hazard assessments for high priority chemicals found at multiple Superfund sites and thereby contributing to decision-making needs for Superfund and other Agency programs (also supported by HHRA under the Science and Technology appropriation);

- Completing 50 new or renewed Provisional Peer Reviewed Toxicity Values (PPRTV) at the request of the Solid Waste and Emergency Response program, and providing health hazard evaluations, provisional reference doses/concentrations (pRfD/Cs), and/or cancer slope factors for priority pollutants to support Agency risk assessments;

- Preparing a draft update of the Exposure Factors Handbook for external review, collating exposure information for use in Superfund site assessments (also supported by HHRA in the Science and Technology appropriation); and

- Providing technical support to Superfund site and program managers on human health risk assessment through the Superfund Technical Support Centers.

The Office of Management and Budget (OMB) rated the program as "moderately effective" in a 2006 Program Assessment Rating Tool (PART) review, which was conducted under the program title "Human Health Risk Assessment."[18] This "moderately effective" rating was attributed to the fact that the program had long-term, annual, and efficiency measures in place, and that the

[17] Available at: http://www.epa.gov/osp/bosc/pdf/hhramypdraft.pdf.
[18] For more information, see http://www.whitehouse.gov/omb/expectmore/detail/10004308.2006.html

program exhibited strong financial management and budget-performance integration. In response to OMB recommendations following the 2006 PART, the program is currently 1) expanding its efficiency measures, 2) developing and implementing revisions to the IRIS review process, 3) investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments, and 4) instituting regular independent program reviews. The program has taken action on each of these recommendations. For example, for a BOSC review that began in November 2007, it developed a BOSC charge including questions to evaluate HHRA's effectiveness and relevance to key risk management decisions. The program also is examining how best to expand its efficiency measure to ensure consistency with other approaches being developed across the Research and Development program and is discussing ways to improve the IRIS prioritization process with OMB.

Performance Targets:

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people and communities.

The program gauges its annual and long-term success in meeting this objective by assessing its progress on several key measures. In 2009, the program plans to meet at least 90% of its planned outputs in support of 1) HHRA Health assessments and 2) HHRA Technical Support Documents.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$76.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$730.0) This reflects a reduction in funding for lower priority research on exposure assessments. This may delay support for science-based decision making in EPA's regulatory and cleanup programs.

- (+$69.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SWDA; HSWA; SARA; CERCLA; ERDDA.

Program Area: Research: Land Protection

Research: Land Protection and Restoration
Program Area: Research: Land Protection
Goal: Land Preservation and Restoration
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$10,907.3	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Leaking Underground Storage Tanks	$657.0	$660.0	$650.0	$413.0	($237.0)
Oil Spill Response	$841.3	$901.0	$887.0	$704.0	($183.0)
Hazardous Substance Superfund	***$23,859.1***	***$20,081.0***	***$19,768.0***	***$21,021.0***	***$1,253.0***
Total Budget Authority / Obligations	$36,264.7	$32,379.0	$31,896.0	$35,488.0	$3,592.0
Total Workyears	134.1	141.3	141.3	154.7	13.4

Program Project Description:

The Land Research Program provides essential research to EPA's Superfund program and Regional Offices to enable them to accelerate scientifically defensible and cost-effective decisions for cleanup at complex contaminated sites. Research themes include: contaminated sediments, ground water, and multi-media issues. The research program also provides site-specific technical support through EPA labs and centers, as well as liaisons located in each Regional Office. As such, this program is a vital component of EPA's efforts to reduce and control risks to human health and the environment.

Research within this program is responsive to the Superfund law requirements under Section 209(a) of Pub. L. 99-499, which states "...a comprehensive and coordinated Federal program of research, development, demonstration, and training for the purpose of promoting the development of alternative and innovative treatment technologies that can be used in response actions under the CERCLA program." These research efforts are guided by the Land Research Program Multi-Year Plan (MYP)[19] which outlines steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures. Specific human health risk and exposure assessments and methods are conducted under the Human Health Risk Assessment program.

The Land Protection and Restoration research program was externally reviewed by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—in FY 2006 (December 2005). The BOSC found that the

[19] EPA, Office of Research and Development, Land Research Program MYP. Washington, DC : EPA. For more information, see

program generates high quality products and conducts appropriately focused multi-disciplinary research.[20]

FY 2009 Activities and Performance Plan:

In FY 2009, research will continue to advance EPA's ability to accurately characterize the transport and uptake of chemicals from contaminated sediments and determine the range and scientific foundation for remedy selection options by improving site characterization, monitoring the effectiveness of remediation and evaluation of novel remedial options. This work directly supports the program's long term goal for the mitigation, management and long-term stewardship of contaminated sites. Documented remediation methods and data are vital to developing new cost-effective methods for managing high-cost decisions at controversial, extensively contaminated sites. Continuing work that the BOSC evaluation found is "being developed in a timely way to characterize contaminated sediments accurately and quickly… [and is] sought actively by clients to achieve contaminant cleanups quickly," the contaminated sediments research integrates exposure models, ecological effects and remediation research in order to improve the understanding of best management practices related to Superfund sites. Consistent with the National Research Council's report, "Sediment Dredging at Superfund Megasites: Assessing the Effectiveness,"[21] EPA will continue the development of alternative sediment remedies with the potential to be more effective than conventional dredging.

In addition, research aimed at developing data to support dosimetric and toxicologic assessment of amphibole asbestos fiber-containing material from Libby, Montana will be conducted. This effort would address key data gaps and provide tools for quantitative characterization, including a comparative analysis of the toxicity of amphibole asbestos-contaminated vermiculite from Libby, Montana relative to other asbestos fibers and asbestos-like mineral occurrences.

The transport of contaminants in ground water and the subsequent intrusion of contaminant vapors into buildings is a critical research issue for EPA's Superfund remediation programs. Work is ongoing to develop reliable soil gas sampling methodologies and to improve vapor intrusion modeling capability. In FY 2009, a report on the vertical distribution of volatile organic compounds (VOC's) from the groundwater to soil will be released to be used as an analytical remediation tool. Permeable reactive barriers (PRB) and the potential expansion of this technology from the treatment of chlorinated organic compounds to inorganic compound will be a major research effort. PRBs are a technology to replace pump and treat methods. Research efforts will also address monitored natural attenuation, specific contamination issues for metals, and treatment of dense non-aqueous phase liquids (DNAPLs).

Research under the multi-media theme includes the development of analytical methods, field sampling guidance, statistical software, monitoring and remediation technologies for mining sites and technical support infrastructure needed to move the products of these research and development activities from the lab and into the hands of site managers and other decision makers. In 2009, immunoassay studies are planned in order to compare techniques that will

[20] BOSC Land Restoration and Preservation Research Subcommittee Report. For more information, see http://www.epa.gov/OSP/bosc/pdf/land0603rpt.pdf

[21] For more information, see http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=11968

allow rapid on-site characterization of contaminant concentration profiles at the Superfund sites. EPA will continue to provide technical support to Superfund project managers via technical support centers (TSCs) and two modeling assistance web sites that provide site-specific technical support to more than 100 cleanup program sites in the form of responses to scientific questions (e.g., engineering and ground water issues) and technology transfer products to EPA program offices and other stakeholders. TSCs provide information based on research results to increase the speed and quality of Superfund cleanups and reduce associated cleanup costs. Development of human health toxicity values and technical support activities are discussed and conducted under the Human Health Risk Assessment Program.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2006 PART review, which was conducted under the program title "Land Protection and Restoration Research."[22] This "adequate" rating was supported by findings that the program had long-term and annual output performance measures in place that reflected the purpose of the program, as well as a strong strategic and evaluation approach. In response to OMB recommendations following the 2006 PART, the program has established a process by which the BOSC will assign a performance rating to each program long-term goal as part of its reviews. These ratings will provide the data for new program long-term outcome measures that will be instated. Using the progress rating expected from the 2008 BOSC review, the program will be able to set appropriate future year targets. Additionally, to address OMB's recommendation that the program establish an outcome-oriented efficiency measure, EPA has initiated a National Academy of Sciences (NAS) study to determine the most appropriate approach. Further, to improve its collection of partner performance information, EPA's Research and Development program is updating its Policy and Procedures Manual on Extramural Resources Management to require that all research and development grants, contracts, and cooperative agreements be linked to one or more Multi-Year Plan Long-Term Goals (LTGs).

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Avg. time (in days) for technical support centers to process and respond to requests for technical document review, statistical analysis and evaluation of characterization and treatability study plans		30.5	29	28	Days

[22] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of the managed material streams, conserve resources and appropriately manage waste long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal.	100	100	100	100	Percent

Work under this program supports EPA's Strategic Plan Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes.

In 2009, the program plans to accomplish its goals of completing and delivering 100 percent of its planned outputs. Additionally, the program plans to meet its efficiency goal of reducing to 28 days its technical support centers' average time for processing and responding to requests for technical document review, statistical analysis, and the evaluation of characterization and treatability study plans. These measures address the increasing utility of EPA research tools and technologies as well as the reduction of uncertainty due to utilization of research and development methodologies, models, and statistical designs. In achieving the performance targets, the program will contribute to EPA's goal of applying sound science in the protection and restoration of land.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,293.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$336.0 / +5.0 FTE) This increase reflects support for the asbestos research program. The Libby asbestos action plan has been driven by concern for the health effects of Libby amphibole. The research and development portion of the Libby asbestos action plan has been peer reviewed both externally and internally, and research which has a short time

line is being initiated, as the goal is to provide input into the risk characterization by 2011.

- (-$688.0) A portion of this reduction will discontinue superfund technical support for site-specific characterization, modeling, monitoring, assessment and remediation of contaminated sites. There also will be delays in developing a framework for modeling fate and transport of contaminants, however, this work will continue.

- (+$312.0) This change reflects the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs. The increase will support higher priority work, such as contaminated sediments research to develop alternative sediment remedies and permeable reactive barrier technology, in the land protection and restoration research program.

Statutory Authority:

SWDA; HSWA; SARA; CERCLA; RCRA; OPA; BRERA.

Program Area: Research: Sustainability

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$24,864.5	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Hazardous Substance Superfund	***$212.3***	***$0.0***	***$0.0***	***$0.0***	***$0.0***
Total Budget Authority / Obligations	$25,076.8	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Total Workyears	81.4	76.2	76.2	70.8	-5.4

Program Project Description:

Under the Small Business Research (SBIR) Program[23], as required by the Small Business Act as amended[24], EPA sets aside 2.5% of its extramural research budget for contracts to small businesses to develop and commercialize new environmental technologies. SBIR, the only activity contained in this program, will not be funded under the Superfund account at this time.

Performance Targets:

Work under this program supports EPA's Enhance Science and Research objective. Currently, there are no PART performance measures for this specific program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- The 2.5% set-aside will be identified when the FY 2009 budget is enacted.

Statutory Authority:

CAA; CWA; FIFRA; PPA; RCRA; SDWA; SBA; SARA; TSCA.

[23] For more information, see http://es.epa.gov/ncer/sbir.
[24] U.S. Public Law 219. 79th Congress, 2nd session, 22 July 1982. *Small Business Innovation Development Act of 1982.* For more information, see http://thomas.loc.gov/cgi-bin/bdquery/z?d097:s.881:.

Program Area: Superfund Cleanup

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$222,093.7***	***$191,880.0***	***$190,011.0***	***$193,853.0***	***$3,842.0***
Total Budget Authority / Obligations	$222,093.7	$191,880.0	$190,011.0	$193,853.0	$3,842.0
Total Workyears	290.0	288.4	288.4	292.4	4.0

Program Project Description:

The Superfund program was initially designed, and has been consistently used, to implement two complementary types of response actions: remedial actions to fully address wastes at the largest, most complex contamination sites (i.e., National Priorities List (NPL) sites); and removal actions to quickly address those releases, whether on the NPL or not, that pose a threat to public health or welfare or the environment; the Superfund Emergency Response and Removal program describes the latter type.

The Superfund Emergency Response and Removal program ensures that releases of hazardous substances, including chemical, biological, and radiological agents, to the environment are appropriately addressed through either a Federal lead action or by providing technical support and oversight to state, local, other Federal responders, and potentially responsible parties (PRPs). EPA, under this program and as the Federal On-Scene Coordinator (OSC)[25], evaluates and responds with emergency and removal actions to releases large and small. This activity ensures that spills are appropriately addressed to protect human health and the environment. EPA provides technical support at emergency, time-critical, and non-time critical response actions. This activity also supports the development and maintenance of the necessary response infrastructure to enable EPA to respond effectively to accidental and intentional releases as well as natural disasters.[26]

FY 2009 Activities and Performance Plan:

EPA personnel assess, respond to, mitigate, and clean up thousands of releases, whether accidental, deliberate, or naturally occurring. In FY 2009, EPA Federal OSCs will conduct and/or provide support for removal assessments, emergency responses, and cleanup response actions at NPL and non–NPL sites. In FY 2009, EPA will complete approximately 195

[25] EPA's roles and responsibilities are further outlined in the National Contingency Plan (NCP).

[26] For more information about the Superfund Emergency Response and Removal program, please refer to http://www.epaosc.net/default.htm.

Superfund-lead removal actions and oversee the completion of approximately 130 voluntary removal actions.

In FY 2009, EPA will continue to respond and conduct site removal actions based upon the risk to human health and the environment. In recent years, emergency response and removal activities have grown more complicated, requiring more resources and time to complete. In addition, these activities often require personnel with specific knowledge of harmful substances, health and safety issues, complex options or the utilization of emerging technologies.

As part of its strategy for improving effectiveness, the Agency will improve response readiness in FY 2009 through information obtained from the Agency's National Approach to Response (NAR) committees and their accomplishments. NAR priorities provide the framework to continue to maintain highly skilled technical personnel in the field, ensuring their readiness to respond to releases of dangerous materials without compromising health and safety.

The Superfund Removal program received its first PART review in 2003 and its second PART review in 2005. The initial program rating was "results not demonstrated" because the program lacked adequate performance measures and an efficiency measure. In 2005, the Removal program received an overall rating of "moderately effective" in the PART review because it established performance and efficiency measures. In addition to implementing the new measures, EPA is taking steps to improve data accuracy and completeness through continuing efforts to modernize the program's data repository, the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). Also, in response to OMB recommendations, EPA will initiate two new outcome performance measures in FY 2008, one focused on human health and the other on acres ready for re-use. Based on its experience in FY 2008, EPA will establish baselines, modify these new measures as needed, and implement them for FY 2009.

For several years, EPA has been implementing an annual assessment of its response and removal preparedness, known as Core Emergency Response (ER). Core ER initiatives are expected to achieve and maintain at least 95 percent of the maximum score on readiness evaluation criteria in each Region and at Headquarters. Core ER was expanded to address Agencywide implementation of EPA's NAR and measure its progress towards being ready to respond to up to five simultaneous incidents of national significance. In FY 2007, Core ER criteria were revised to improve preparedness, in line with the EPA 2006-2011 Strategic Plan. EPA will revise these instruments annually or as needed to reflect experience.

Annual performance for the Superfund Removal program is measured by the number of Superfund-lead removal actions completed, and the number of private party removal actions overseen by EPA and completed. The PART efficiency measure for the program reflects the number of Superfund-lead removal actions completed per million dollars. Both the Superfund-lead and the voluntary removal measures contribute to the goals of EPA's 2006-2011 Strategic Plan.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Superfund-lead removal actions completed annually.	200	195	195	195	Removals

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Superfund-lead removal actions completed annually per million dollars.	1.04	0.92	0.93	0.94	Removals

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Voluntary removal actions, overseen by EPA, completed.	151	120	125	130	Removals

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,175.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$1,667.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to technical changes such as realignment of IT, travel or other support costs across programs. These funds will enable the program to conduct removal actions and perform removal support activities to respond to additional releases and threats that may impact human health and the environment.

- (+4.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. The FTE were redirected from the Superfund Remedial program and will be allocated at the Regional level to bolster Emergency Response capabilities.

Statutory Authority:

CERCLA, Sections 104, 105, 106; CWA; OPA.

Superfund: EPA Emergency Preparedness
Program Area: Superfund Cleanup
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$9,101.6***	***$9,318.0***	***$9,195.0***	***$9,504.0***	***$309.0***
Total Budget Authority / Obligations	$9,101.6	$9,318.0	$9,195.0	$9,504.0	$309.0
Total Workyears	40.1	44.1	44.1	44.1	0.0

Program Project Description:

EPA implements the Emergency Preparedness program in coordination with the Department of Homeland Security (DHS) and other Federal agencies to deliver Federal assistance to state, local, and Tribal governments during natural disasters and other major environmental incidents. The Agency carries out this responsibility under multiple statutory authorities as well as the National Response Plan (NRP), which provides the framework and structure for managing national emergencies. EPA is the designated lead for the NRP's Emergency Support Function covering hazardous materials, oil, and other contaminants. As such, the Agency participates with interagency committees and workgroups to develop national planning and implementation policies at the operational level.

EPA also chairs the 16 agency National Response Team (NRT) and co-chairs multiple Regional Response Teams (RRTs) throughout the United States. The teams coordinate the actions of Federal partners to prevent, prepare for, and respond to emergencies.

FY 2009 Activities and Performance Plan:

Preparedness on a national level is essential to ensure that EPA, other Federal agencies, and state and local emergency responders are able to deal with multiple emergencies. This program will continue to enhance the Agency's readiness capabilities in FY 2009 by improving internal and external coordination with those agencies.

In FY 2009, EPA will continue to chair and provide administrative and logistical support to the NRT and co-chair the 13 RRTs throughout the United States. The NRT and RRTs coordinate Federal partner actions to prevent, prepare for, and respond to releases of hazardous substances and other emergencies, whether accidental or intentional. The NRT and the RRTs are the only active environmentally-focused interagency executive committees addressing oil and hazardous substance emergencies. EPA will continue to support and participate on these standing committees.

Building on current efforts to enhance national emergency response management, NRT agencies will continue implementation of the National Incident Management System (NIMS) and the NRP. NRT agencies will improve notification and response procedures, develop response technical assistance documents, and continue to implement and test incident command/unified command systems across all levels of government and the private sector as well as assist in the development of Regional Contingency Plans and Local Area Plans.

In FY 2009, EPA will provide technical assistance, training, and exercises to continue fostering a working relationship between state, local, and Federal responders implementing the system. EPA will lead participants in the development of scenario-specific national and regional level plans to respond to terrorist events and incidents of national significance.

EPA also will continue to provide staff support as needed during national disasters, emergencies and other high profile, large-scale responses carried out under the NRP. When activated under the NRP, EPA supports activities at the NRT, RRTs, Domestic Readiness Group, Incident Advisory Council and the National Operations Center.

In FY 2009, EPA will continue to conduct an annual readiness training event for Federal On-Scene Coordinators, which is attended by EPA and its government partners from other Federal agencies, states, and local entities. This training offers short courses on a variety of environmentally related emergency response topics designated to efficiently utilize Federal first responders.

Performance Targets:

Work under this program supports EPA's objective for restoring land. Currently, there are no performance measures specific to this Program/Project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$262.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$47.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CERCLA; CWA; OPA; Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, 42 U.S.C. 5121 et seq.

Superfund: Federal Facilities
Program Area: Superfund Cleanup
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$31,763.5***	***$31,879.0***	***$31,447.0***	***$31,440.0***	***($7.0)***
Total Budget Authority / Obligations	$31,763.5	$31,879.0	$31,447.0	$31,440.0	($7.0)
Total Workyears	138.4	134.0	134.0	134.0	0.0

Program Project Description:

The Superfund Federal Facilities Response program facilitates faster, more effective and less costly cleanup and reuse of Federal facilities while ensuring protection of human health and the environment from releases of hazardous substances. Nationwide, there are many Federal facilities which are contaminated with hazardous waste, military munitions, radioactive waste, fuels, and a variety of other toxic contaminants. These facilities include various types of sites, such as Formerly Used Defense Sites (FUDS), active, realigning and closed installations, abandoned mines, nuclear weapons production facilities, fuel distribution areas, and landfills. The Agency fulfills a number of statutory and regulatory obligations at Federal facilities, including conducting oversight of those sites on the Superfund National Priorities List (NPL) where cleanup is being done by other Federal agencies, such as the Department of Defense (DOD) and the Department of Energy (DOE). In fulfilling its management responsibilities, the program collaborates with other Federal agencies, state and local governments, tribes, and communities.

The Superfund Federal Facilities Response program also provides technical assistance to other Federal entities, states, tribes, local governments, and communities during the cleanup of Federal properties. One role of the program is to ensure statutory responsibilities related to the transfer of contaminated Federal properties at both NPL and non-NPL sites are properly met. Such responsibilities include approval of transfers prior to implementation of remedies at NPL sites (i.e., early transfer), and approving determinations that remedies are operating "properly and successfully" at both NPL and non-NPL sites. Often EPA, and the parties implementing the remedies, face unique challenges due to the types of contamination present, the size of the facility and extent of contamination, ongoing facility operations that need to continue, complex community involvement requirements, and complexities related to the redevelopment of the facilities. For more information about the program, please refer to http://www.epa.gov/fedfac/.

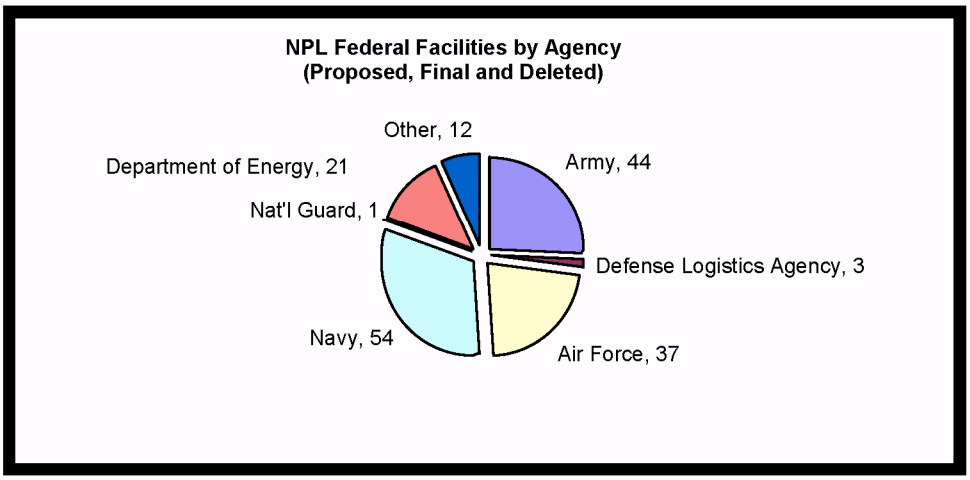
FY 2009 Activities and Performance Plan:

The Superfund Federal Facilities Response program will continue strengthening its efforts towards ensuring the safe reuse of former Federal properties, as well as ensuring the safe

continued use of facilities under the jurisdiction of the Federal government. The program will continue working with state and local governments, tribes, communities, and transferees to ensure properties transferred to non-Federal entities will be reused in a safe and productive manner. At properties that will remain under Federal jurisdiction and control, the program will work with the other Federal agencies to ensure that cleanup remedies are appropriate for continued Federal use.

In FY 2009, the Superfund Federal Facilities Response program will continue focusing on achieving site construction completions, accelerating cleanups, promoting reuse of current and formerly owned Federal properties and ensuring appropriate community involvement. As of October 2007, there were: 152 final Federal facilities on the NPL, 15 Federal facilities deleted from the NPL, 5 Federal facilities proposed to be added to the NPL, 71 (41 percent) Federal facilities with a final remedy selected, 59 (34 percent) Federal facilities that had achieved site construction completion and 22 (13 percent) Federal facilities identified as site-wide ready for anticipated use.

As of October 2007, the program was conducting oversight and/or providing technical assistance on 404 ongoing Remedial Investigations/Feasibility Studies (RI/FS) and 194 ongoing Remedial Actions (RA) at 152 final NPL Federal facilities.



Other Federal Agencies include: U.S. Coast Guard (1), Dept. of the Interior (2), Dept. of Transportation (1), EPA (1), Federal Aviation Administration (1), National Aeronautics & Space Administration (2), Small Business Administration (1), U.S. Dept. of Agriculture (2), U.S. Army Corps of Engineers (1).
Source: FFRRO's website, http://www.epa.gov/fedfac/documents/npl2007.htm#2

In FY 2009, EPA will continue providing oversight and technical assistance, as appropriate, at DOD's military munitions response sites, including oversight of some FUDS with munitions. FUDS are properties formerly owned, leased, possessed, or operated by DOD that are now owned by a non-DOD party.

The Superfund Federal Facilities Response program will continue working with the U.S. Army Corps of Engineers (USACE) and states in the cleanup of the Formerly Utilized Sites Remedial Action Program (FUSRAP) properties. FUSRAP properties are contaminated with radioactive

materials and mixed waste resulting from the nation's early atomic weapons and energy program. Three of the 27 active FUSRAP sites are listed on the Superfund NPL, and the USACE and DOE are currently evaluating several sites proposed for the NPL.

The program will continue monitoring the progress of five-year reviews being conducted at Federal sites where waste has been left in place and land use is restricted as a result of that contaminated waste. In FY 2009, the program will review approximately 28 five-year review reports at Federal facility NPL sites to fulfill statutory requirements and inform the public regarding the protectiveness of remedies at those facilities. Improving the quality and consistency of five-year review reports is a priority for the program.

The program also will continue supporting DOD at selected Base Realignment and Closure (BRAC) installations closed or realigned during the first four rounds of BRAC (BRAC I-IV). Because the BRAC I-IV accelerated cleanup program is funded by DOD through an interagency agreement expiring on September 30, 2008, EPA and DOD are currently negotiating a new BRAC I-IV agreement with a proposed expiration date of September 30, 2011. The fifth round of BRAC (BRAC V), finalized on November 9, 2005, has resulted in additional EPA work requirements at selected BRAC V installations. This includes, but is not limited to, meeting and expediting statutory obligations for overseeing cleanup and facilitating property transfer. The Agency's FY 2009 request does not include additional support for BRAC-related services to DOD at BRAC V facilities. If EPA services are required at levels above its base for BRAC V related installations, the Agency will require reimbursement from DOD for the costs the Agency incurs to provide those services.

The program underwent a PART assessment entitled "EPA Support for Cleanup of Federal Facilities" in FY 2005 and received an overall rating of "moderately effective." As follow-up to the PART, the program has been working with other Federal agencies to achieve long-term environmental measures. These efforts will continue in FY 2008. In addition, the program conducted a policy review in FY 2006 to ensure policies and guidance documents are still relevant, updated, and comprehensive. The program implemented several of the resulting recommendations in FY 2007 and will implement additional recommendations in FY 2008. Another review of the program is currently being conducted which will analyze the program's planning and data processes for cleanup milestones. Results and recommendations generated from this review may be implemented as early as FY 2009.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Program dollars expended annually per operable unit completing cleanup activities.	1,019	960	920	813	Thousand

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined.	71	76	81	85	Remedies

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of Federal Facility Superfund sites where all remedies have completed construction.	59	56	60	64	Sites

Performance goals and measures in EPA's Strategic Plan and Government Performance and Results Act for the Superfund Federal Facilities Response program are currently a component of the overall Superfund Remedial program's measures. The Agency's ability to meet its annual Superfund targets is partially dependent on work performed at Federal facility sites on the NPL.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$763.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$238.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel, or other support costs across programs.
- (-$1,008.0) This decrease is primarily related to contract funding. A decrease to the contracts budget will not impede the program's efforts to maximize efficiency and effectiveness of mandatory requirements at Federal sites on the NPL.

Statutory Authority:

CERCLA Section 120/SARA, Section 311; RCRA, Section 7003; Defense Base Closure and Realignment Act of 1988, 1990, 1992, 1994, and 2004 as amended by the National Defense Authorization Acts and the Base Closure Community Redevelopment and Homeless Assistance Act; Community Environmental Response Facilitation Act, Section 3 [CERCLA 120(h)(4) uncontaminated parcels determinations]; National Defense Authorization Act for FY 2007, Section 2404; NEPA, Section 102; and CAA, Section 309.

Superfund: Remedial
Program Area: Superfund Cleanup
Goal: Land Preservation and Restoration
Objective(s): Restore Land; Enhance Science and Research

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$659,513.4***	***$584,836.0***	***$591,078.0***	***$586,120.0***	***($4,958.0)***
Total Budget Authority / Obligations	$659,513.4	$584,836.0	$591,078.0	$586,120.0	($4,958.0)
Total Workyears	960.9	946.2	946.2	944.2	-2.0

Program Project Description:

The Superfund Remedial program addresses contamination from uncontrolled releases at Superfund sites that may threaten human health and the environment. Superfund sites with contaminated soils, surface water, sediments, and groundwater exist nationally in hundreds of communities and can also encompass very large land areas. Many of these sites are located in urban areas and may expose populations to contamination. Once contaminated, groundwater, surface water, sediments, and soils may be extremely technically challenging and costly to clean up. Some sites will require decades to clean up due to site-specific physical characteristics and their associated unique contamination footprints. For some sites, removing or destroying all of the contamination is not possible, and residual contamination will need to be managed on-site, creating the need for site-specific long-term stewardship activities.

The Superfund Remedial program manages the risks that these uncontrolled hazardous waste sites present to human health and the environment through carefully selected cleanup, stabilization, or other actions, and, in so doing, helps make these sites available for reuse. Resources in this program are used to:

- collect and analyze data at sites to determine the potential effect of contaminants on human health and the environment and the need for an EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response;
- ensure the highest priority sites are addressed by adding and deleting sites to/from the National Priorities List (NPL);
- conduct or oversee investigations and studies to select remedies;
- design and construct or oversee construction of remedies and post-construction activities at non-Federal facility sites;
- control human exposures to contamination and the spread of contaminated groundwater;
- ensure long-term protectiveness of remedies by overseeing operations and maintenance and conducting five-year reviews;
- identify when sites can be made available for reuse; and

- work with other Federal agencies, states, tribes, local governments, and local communities to improve their involvement in the cleanup process.

For more information about the Superfund Remedial program, please refer to http://www.epa.gov/superfund/index.htm.

FY 2009 Activities and Performance Plan:

In FY 2009, as in prior years, cleanup work at contaminated sites on the NPL remains the top priority of the Superfund Remedial program. The program will continue to address intractable and complicated environmental and human health problems, such as contaminated soil and groundwater affecting homeowners and their families in residential areas. The goal of the program's work is ultimately to provide long-term human health and environmental protection at the nation's most contaminated hazardous waste sites. In addition to its cleanup work, the Superfund Remedial program will undertake temporary activities, when appropriate, to protect people and the environment from the immediate threats posed by uncontrolled hazardous wastes or contaminated groundwater, such as providing alternative drinking water supplies or relocating residents. These efforts demonstrate the Agency's commitment to protecting human health and the environment from possible short- and long-term effects of site-related contamination.

EPA will continue to assess uncontrolled releases at sites where EPA has been notified by states, tribes, citizens, other Federal agencies, or other sources of a potential hazardous waste site or incident. EPA assesses these sites to determine whether Federal action is needed. EPA plans to complete 400 site assessment decisions in FY 2009.

For those sites requiring additional action to protect human health and the environment, EPA uses the NPL to identify sites that are the highest priorities. Sites posing immediate risks may also be addressed under authority of the Superfund Removal program. In FY 2009, EPA will continue investigating sites to determine the best approach for individual sites to be addressed, including listing them on the NPL. In FY 2007, EPA added 12 new sites on the NPL, and proposed 17 sites to the NPL. As of the end of FY 2007, 1,635 sites were either proposed to, final on, or deleted from the NPL, of which 172 were Federal facility sites.

At sites listed on the NPL, EPA will continue to begin remedial work with site investigations and feasibility studies to review site conditions and evaluate strategies for cleanup, taking into consideration reasonably anticipated future land use. At the end of FY 2007, EPA had more than 350 such investigations and studies underway, which form the foundation for remedy selection documented in a Record of Decision (ROD). Many sites also require multiple cleanup plans to address all the contamination at the site. A significant number of sites in FY 2009 will still require further characterization before remedy decisions can be made and construction can take place. Community involvement is a key component in selecting the proper remedy at a site, and the Agency will continue to emphasize the importance of the community in its decision-making and remedy implementation and construction activities.

EPA has increasingly focused resources on remedy construction to achieve site progress. Prior to remedy construction, however, EPA conducts the remedial design (RD) for the site cleanup

where the technical specifications for cleanup remedies and technologies are designed based on the ROD. Following the RD, the actual construction or implementation of the cleanup remedy will be performed (called the Remedial Action (RA)) by EPA (or states with EPA funding) or potentially responsible parties under EPA or state oversight. EPA is committed to providing resources to maintain adequate construction progress at all sites, including large and complicated remedial projects, once construction has started. Funding for EPA Superfund construction projects is critical to achieving risk reduction, construction completion, and restoration of contaminated sites to allow productive reuse. In FY 2009, the program will continue to work with Regions to improve long-term planning construction estimates, including planning for the use of resources received from settlements with potentially responsible parties (PRPs) for future response work.

EPA tracks construction completions as an interim measure of progress towards making sites ready for reuse, and achieving site cleanup goals. Sites qualify for construction completion when, 1) all necessary physical construction is complete, whether or not final cleanup levels or other requirements have been achieved, 2) EPA has determined that the response action should be limited to measures that do not involve construction, or 3) the site qualifies for deletion from the NPL. EPA may delete a final NPL site if it determines that all cleanup objectives have been met and no further response is required to protect human health or the environment. In FY 2009, EPA will achieve 35 site construction completions for a cumulative total of 1,095 NPL sites, and will continue to delete sites from the NPL as appropriate.

EPA will also continue to give attention to post-construction completion activities to ensure that Superfund response actions provide for the long-term protection of human health and the environment. Approximately 65 percent of NPL sites have achieved construction completion and are in the post-construction phase of cleanup, while many other sites have achieved completion of some aspects of their cleanups. One example of a post-construction activity are Five-Year Reviews, which generally are required when hazardous substances remain on site above levels that permit unrestricted use and unlimited exposure to evaluate the implementation and performance of a remedy and determine whether it remains protective of human health and the environment. These reviews are usually performed five years following the initiation of a CERCLA response action, and are repeated in succeeding five-year intervals so long as future uses remain restricted. EPA plans to conduct over 200 Five-Year Reviews in FY 2009. In addition, the Agency will continue to need resources to conduct activities to ensure remedies are working optimally and as intended at sites where any hazardous substances, pollutants, or contaminants remain above levels that allow for unlimited use and unrestricted exposure.

Redevelopment at NPL sites helps communities return some of the nation's worst hazardous waste sites to safe and productive uses. While cleaning up these Superfund sites and making them protective of human health and the environment, EPA is working with communities and other partners in considering future use opportunities and integrating appropriate reuse options into the cleanup process. The Agency is also working with communities on already remediated sites to ensure long-term stewardship of site remedies to create opportunities for reuse. As a means of more consistently summarizing land revitalization impacts and outcomes, EPA developed the Site-wide Ready for Anticipated Use measure. The measure identifies construction complete Superfund NPL sites where the entire land portion of the site is being

used, or has been made ready to use in the future, in a protective fashion. The measure reflects the high priority EPA places on land revitalization as an integral part of the Agency's cleanup mission for the Superfund program as well as the priority EPA is now placing on post-construction activities at NPL sites. In FY 2009, EPA will work towards making 30 sites qualified for this designation.

EPA introduced two measures in FY 2002 to document progress achieved towards providing short- and long-term human health protection. The Site-Wide Human Exposure environmental indicator is designed to document the progress achieved towards providing long-term human health protection on a site-wide basis by measuring the incremental progress achieved in controlling unacceptable current human exposures at a site. In FY 2009, EPA will achieve control of all identified unacceptable human exposures at a net total of 10 additional sites, bringing the program's cumulative total to 1,302 sites under control. The Migration of Contaminated Ground Water Under Control environmental indicator applies to NPL sites that contain contaminated ground water to document whether contamination levels fall within the levels specified as safe by EPA, or if they do not, whether the migration of contaminated ground water is stabilized, and there is no ground water discharge to surface water. In FY 2009, EPA will achieve control of the migration of contaminated groundwater through engineered remedies or natural processes at a net total of 15 additional sites, bringing the program's cumulative total to 1,007 sites under control.

The Agency will continue to take actions to improve program management and increase efficiency. In FY 2009, the Agency, in coordination with the U.S. Army Corps of Engineers and consulting engineers, plans to advise Regional offices on how to best stage significant design and construction projects. The effort will augment the Agency's technical outreach to the Regions by expanding access to technical resources made available to EPA Regional project managers to help promote the efficiency of project delivery and facilitate project progress through the Superfund pipeline. In addition, the Agency will continue focusing on optimizing groundwater remedies and sharing best practices with Regional offices for cost management and efficiency improvements.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of Superfund sites ready for anticipated use site-wide.	64	30	30	30	Sites

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of Superfund sites with human exposures under control.	13	10	10	10	Sites

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Superfund final site assessment decisions completed.	395	350	400	400	Assessments

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Annual number of Superfund sites with remedy construction completed.	24	24	30	35	Completions

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Superfund sites with contaminated groundwater migration under control.	19	10	15	15	Sites

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Human exposures under control per million dollars.	6.90	6.1	6.4	6.7	Sites

The Superfund Remedial program reports its activities and progress towards long-term human health and environmental protection via several measures that encompass the entire cleanup process. In FY 2007 The Superfund Remedial program met or exceeded all of its performance measure targets. In 2009, all targets will remain or exceed the FY 2008 levels. For FY 2009, EPA has set an aggressive target of 35 construction completions to maintain progress toward achieving the long-term goal identified in EPA's FY 2006-2011 Strategic Plan.

In FY 2007, the program introduced a new efficiency measure that tracked the number of NPL sites with human exposures under control per million dollars. EPA is currently working to modernize the program's data repository (i.e., the Comprehensive Environmental Response, Compensation, and Liability Information System, or CERCLIS) to ensure accurate and complete information on program performance and financial management.

Performance goals and measures for the Superfund Federal Facilities Response program are a component of the Superfund Remedial program's measures. The Agency's ability to meet its annual Superfund targets is partially dependent on work performed by other Federal agencies at NPL Federal facility sites.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$5,049.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$6,090.0) This reduction does not maintain a net increase in funding directed by Congress in the FY 2008 Omnibus for the Superfund Remedial program after application of the 1.56% rescission.

- (-$3,917.0) Various Headquarters program functions will be reduced to maintain high levels of funding for site-specific response activities conducted in the Regions. This reduction will not impede site cleanup progress.

- (-2.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

Statutory Authority:

CERCLA of 1980, Section 104, as amended by SARA of 1986, as reauthorized as part of the Omnibus Budget Reconciliation Act of 1990.

Superfund: Support to Other Federal Agencies
Program Area: Superfund Cleanup
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Hazardous Substance Superfund	***$4,967.0***	***$6,575.0***	***$6,472.0***	***$6,575.0***	***$103.0***
Total Budget Authority / Obligations	$4,967.0	$6,575.0	$6,472.0	$6,575.0	$103.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Other Federal agencies contribute to the Superfund program by providing services in areas where EPA does not possess the necessary specialized expertise. These agencies provide numerous Superfund-related services which Superfund resources support. Contributors include the Department of Interior (DOI), the National Oceanic and Atmospheric Administration (NOAA), and the United States Coast Guard (USCG).

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to provide resources through interagency agreements to support other select Federal agencies. The following table illustrates the levels of funding proposed to be provided to each Federal agency in EPA's FY 2009 request:

Other Federal Agency Funding
($ in thousands)

Agency	FY 2009 Pres Bud
DOI	$546.0
NOAA	$1,063.0
USCG	$4,966.0
TOTAL	**$6,575.0**

Under the EPA/DOI interagency agreement, DOI will provide response preparedness and management assistance that supports the National Response Team/Regional Response Teams (NRT/RRTs), and EPA's Special Units including the Environmental Response Team, the National Decontamination Team, and the Radiation Response Team. In addition, DOI will assist EPA in the development and implementation of comprehensive and environmentally protective

remedies affecting DOI-owned sites as well as the coordination of natural resource trustee agency[27] support.

Under the EPA/NOAA interagency agreement, EPA Regional offices are provided direct access to NOAA's multidisciplinary technical support experts in the fields of coastal remediation, scientific resource coordination and response management. NOAA, which is also a natural resource trustee agency, will provide site-specific technical support during hazardous waste site investigations, assist in ecological risk assessments, identify and evaluate the severity of risks posed to natural resources from hazardous waste sites, and evaluate strategies/methods of minimizing those risks. NOAA's experts have produced high quality evaluations of risk to the environment and natural resources from releases at Superfund sites, development and implementation of comprehensive and environmentally protective remedies, and coordination of trustee support. At the proposed level of funding, NOAA is expected to assist EPA at approximately 70-100 sites. NOAA also will assist in developing and conducting field testing of advanced chemical sampling and analytical equipment used for cost effective and efficient response operations. New technology and information will be applied by NOAA to identify effective countermeasures during response operations.

EPA and the USCG share lead responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for response actions. The USCG, serving as a Federal On-Scene Coordinator (OSC), will conduct small scale Superfund removals in the coastal zone of any release or threatened release into the environment of hazardous substances, pollutants, or contaminants which may present an imminent and substantial danger to the public health or welfare or the environment. In FY 2009, other Federal agency funding will support USCG district offices, marine safety field units, USCG Strike Teams and National Response Center activities. It also provides for the planning, coordination and response infrastructure to ensure the USCG is fully prepared to respond to CERCLA incidents.

Performance Targets:

Work under this program supports EPA's objective for restoring land. Currently, there are no performance measures specific to this Program/Project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$103.0) This change reflects restoration of the 1.56% rescission.

Statutory Authority:

CERCLA Sections 104, 105, 106, 120; CWA; OPA.

[27] Natural Resource Trustees are outlined in the Comprehensive Environmental Response, Compensation, and Liability Act and have different, but complementary, roles and responsibilities. For more information, please refer to http://www.epa.gov/superfund/programs/nrd/fields.pdf

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Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification

APPROPRIATION: Leaking Underground Storage Tanks
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Leaking Underground Storage Tanks					
Budget Authority	$83,673.9	$72,461.0	$105,816.0	$72,284.0	($33,532.0)
Total Workyears	67.3	75.3	75.3	75.3	0.0

Program Projects in LUST
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Compliance					
Compliance Assistance and Centers	$644.1	$688.0	$709.0	$753.0	$44.0
IT / Data Management / Security					
IT / Data Management	$136.5	$177.0	$174.0	$162.0	($12.0)
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$717.1	$696.0	$685.0	$696.0	$11.0
Facilities Infrastructure and Operations (other activities)	$131.4	$205.0	$202.0	$206.0	$4.0
Subtotal, Facilities Infrastructure and Operations	$848.5	$901.0	$887.0	$902.0	$15.0
Acquisition Management	$223.1	$165.0	$162.0	$165.0	$3.0
Central Planning, Budgeting, and Finance	$812.6	$1,102.0	$1,085.0	$1,131.0	$46.0
Human Resources Management	$3.0	$3.0	$3.0	$3.0	$0.0
Subtotal, Operations and Administration	$1,887.2	$2,171.0	$2,137.0	$2,201.0	$64.0
Research: Land Protection					
Research: Land Protection and Restoration	$657.0	$660.0	$650.0	$413.0	($237.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Underground Storage Tanks (LUST / UST)					
LUST / UST					
EPAct & Related Authorities Implemention	$0.0	$0.0	$1,575.0	$0.0	($1,575.0)
LUST / UST (other activities)	$14,996.1	$10,558.0	$10,393.0	$10,548.0	$155.0
Subtotal, LUST / UST	$14,996.1	$10,558.0	$11,968.0	$10,548.0	($1,420.0)
LUST Cooperative Agreements					
EPAct & Related Authorities Implemention	$0.0	$0.0	$28,941.0	$0.0	($28,941.0)
LUST Cooperative Agreements (other activities)	$65,353.0	$58,207.0	$61,237.0	$58,207.0	($3,030.0)
Subtotal, LUST Cooperative Agreements	$65,353.0	$58,207.0	$90,178.0	$58,207.0	($31,971.0)
Subtotal, Underground Storage Tanks (LUST / UST)	$80,349.1	$68,765.0	$102,146.0	$68,755.0	($33,391.0)
TOTAL, EPA	$83,673.9	$72,461.0	$105,816.0	$72,284.0	($33,532.0)

Program Area: Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$28,226.9	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
Leaking Underground Storage Tanks	***$644.1***	***$688.0***	***$709.0***	***$753.0***	***$44.0***
Oil Spill Response	$267.9	$291.0	$286.0	$303.0	$17.0
Hazardous Substance Superfund	$11.1	$22.0	$22.0	$22.0	$0.0
Total Budget Authority / Obligations	$29,150.0	$30,548.0	$28,742.0	$27,513.0	($1,229.0)
Total Workyears	205.7	208.4	208.4	198.4	-10.0

Program Project Description:

To improve compliance with environmental laws, regulated entities, Federal agencies, and the public benefit from easy access to tools that help them understand these laws and find efficient, cost-effective means for putting them into practice. To protect our nation's groundwater and drinking water from petroleum releases from Underground Storage Tanks (UST), EPA will continue to provide compliance assistance tools, technical assistance, and training to promote and enforce UST systems compliance.[1]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to provide general and targeted compliance assistance to the regulated community and integrate assistance into its enforcement and compliance assurance efforts. In FY 2009, the Agency also will continue to obtain state commitments to increase their inspection and enforcement presence where state-specific UST compliance goals are not met. The Agency and states will use innovative compliance approaches, along with outreach and education tools, to bring more USTs into compliance. The Agency also will continue to provide guidance to foster the use of new technology to enhance compliance.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a

[1] For more information refer to: www.epa.gov/swerust1/cat/index.htm.

result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports the goal to preserve land. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$53.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$9.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

PPA; CERFA; NEPA; AEA; UMTRLWA.

Program Area: IT / Data Management / Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Science & Technology	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Leaking Underground Storage Tanks	***$136.5***	***$177.0***	***$174.0***	***$162.0***	***($12.0)***
Oil Spill Response	$23.8	$34.0	$33.0	$24.0	($9.0)
Hazardous Substance Superfund	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Total Budget Authority / Obligations	$119,854.2	$111,067.0	$110,496.0	$115,277.0	$4,781.0
Total Workyears	497.4	488.0	488.0	488.0	0.0

Program Project Description:

Agency offices rely on the IT/Data Management Leaking Underground Storage Tanks (LUST) program and its capabilities to develop and implement tools for ready access to accurate and timely data. This program houses all of the critical IT infrastructure that allows rapid efficient communication exchange and storage of data, analysis and computations. It also allows public access to the scientific, regulatory, and best practice infrastructure needed by Agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the Research and Development and Air and Radiation offices to access scientific and program data. Because the IT/Data Management function supports the entire Agency, funds are provided in each operating appropriation including LUST.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal. The program: (1) supports the development, collection, management, and analysis of environmental data (to include both point source and ambient data) to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise

architecture which includes data standardization, integration, and public access; (3) manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines; and (4) supports Regional information technology infrastructure, administrative and environmental programs, and telecommunications.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Information Technology community will continue to focus on improving the Agency's use of technology, pursuing enterprise solutions, and protecting privacy and security of data holdings while improving delivery of information and services to partners and citizens. The Agency's IT/Data Management program forms the core of this effort with its focus on building and implementing the Agency's Integrated Portal and Enterprise Content Management System, developing Environmental Indicators, and continuing to deploy enterprise-wide IT infrastructure solutions.

The Environmental Information programs technology efforts have three major components:

- OEI's efforts in the areas of Analytical Capacity and Indicators are expected to help identify data gaps, and suggest areas where additional capacity is needed;
- Through use of the portal and Exchange Network, the Technology Initiative program will increase the integration of quality data, streamline transactions to foster collaboration, reduce the data entry burden, and improve decision making;
- OEI's Readiness to Serve initiative will build the capacity and infrastructure needed to allow more EPA employees to telecommute or work safely and securely in the field.

In FY 2009 the IT/Data Management LUST resources continue to support EPA's "Readiness to Serve" infrastructure program. This program delivers secure information services to ensure that the Agency and its programs have a full range of information technology infrastructure components (e.g., user equipment, network connectivity, e-mail, application hosting, remote access) that make information accessible across the spectrum of mission needs at all locations. The Program uses performance-based, outsourced services to obtain the best solutions (value for cost) for the range of program needs. This includes innovative multi-year leasing that sustains and renews technical services in a least-cost, stable manner as technology changes over time (e.g., desktop hardware, software and maintenance).

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$12.0) This change reflects a redirection of costs from general expenses, grants and contracts originating in the LUST funded portion of this program, as well as the restoration of the 1.56% rescission to all program projects.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD, and DAA; TSCA; FIFRA; FQPA; SDWA and amendments; FFDCA; EPCRA; RCRA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Science & Technology	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Building and Facilities	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Leaking Underground Storage Tanks	***$848.5***	***$901.0***	***$887.0***	***$902.0***	***$15.0***
Oil Spill Response	$500.4	$490.0	$488.0	$496.0	$8.0
Hazardous Substance Superfund	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

LUST resources in the Facilities Infrastructure and Operations Program Project are used to manage activities and support services in many centralized administrative areas at EPA. These include health and safety, environmental compliance, occupational health, medical monitoring, fitness/wellness, and environmental management functions. LUST resources for this program also support a full range of ongoing facilities management services including: facilities maintenance and operations; Headquarters security; space planning; shipping and receiving; property management; printing and reproduction; mail management; and transportation services. Because this program supports the entire Agency, funds are included in most appropriations.

FY 2009 Activities and Performance Plan:

- For FY 2009, the Agency is requesting a total of $696 thousand for rent and $55 thousand for transit subsidy in the LUST appropriation.

- The Agency will continue to manage its lease agreements with General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct.

- EPA will provide transit subsidy to eligible applicants as directed by Executive Order 13150[2] *Federal Workforce Transportation.*

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2.0) Provides additional resources for increases in transit subsidy cost.

- (+$13.0) This change reflects restoration of the 1.56% rescission to all program projects to fund increases in transit subsidy and rent.

Statutory Authority:

Federal Property and Administration Services Act; Public Building Act; annual Appropriations Acts; CWA; CAA; D.C. Recycling Act of 1988; Executive Orders 10577 and 12598; Homeland Security Presidential Decision Directive 63 (Critical Infrastructure Protection).

[2] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$23,654.1	$29,992.0	$28,629.0	$31,195.0	$2,566.0
Leaking Underground Storage Tanks	***$223.1***	***$165.0***	***$162.0***	***$165.0***	***$3.0***
Hazardous Substance Superfund	$19,129.3	$24,645.0	$24,327.0	$24,985.0	$658.0
Total Budget Authority / Obligations	$43,006.5	$54,802.0	$53,118.0	$56,345.0	$3,227.0
Total Workyears	340.9	357.3	357.3	362.9	5.6

Program Project Description:

LUST resources in this program support contract and acquisition management activities at Headquarters, Regional Offices, Research Triangle Park and Cincinnati facilities. Sound contract management fosters efficiency and effectiveness assisting all of EPA's programs. EPA focuses on maintaining a high level of integrity in the management of its LUST-related procurement activities, and in fostering relationships with state and local governments, to support the implementation of environmental programs.

FY 2009 Activities and Performance Plan:

In FY 2009, the Agency will continue to refine electronic government capabilities and enhance the education of its contract workforce. In addition, LUST resources will also support the Superfund/RCRA Regional Procurement Operations Division (SRPOD) in its contract and acquisition management activities.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; FAR; contract law.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$64,431.2	$74,960.0	$73,949.0	$80,623.0	$6,674.0
Leaking Underground Storage Tanks	***$812.6***	***$1,102.0***	***$1,085.0***	***$1,131.0***	***$46.0***
Hazardous Substance Superfund	$20,428.7	$24,306.0	$24,008.0	$26,102.0	$2,094.0
Total Budget Authority / Obligations	$85,672.5	$100,368.0	$99,042.0	$107,856.0	$8,814.0
Total Workyears	519.9	530.0	530.0	538.1	8.1

Program Project Description:

Activities under the Central Planning, Budgeting and Finance program support the management of integrated planning, budgeting, financial management, performance and accountability processes and systems to ensure effective stewardship of resources. PART and GPRA coordination is also a priority. (Refer to http://www.epa.gov/ocfo/functions.htm for additional information).

FY 2009 Activities and Performance Plan:

The Agency works to ensure sound financial and budgetary management through the use of routine and ad hoc analysis, statistical sampling and other evaluation tools. In addition, more structured and more targeted use of performance measurements has led to better understanding of program impacts as well as leverage points to increase effectiveness.

EPA will continue efforts to modernize the Agency's financial systems and business processes. The Agency is working to replace its legacy accounting system and related modules with a new system certified to meet the latest government accounting standards. This extensive modernization effort will allow the Agency to improve efficiency and automate quality control functions to simplify use of the system as well as comply with Congressional direction and new Federal financial systems requirements. This work is framed by the Agency's Enterprise Architecture and will make maximum use of enabling technologies for e-Gov initiatives including e-Procurement, e-Payroll, and e-Travel.

EPA plans further improvements to its budgeting and planning system, financial data warehouse, business intelligence tools and reporting capabilities. These improvements will support EPA's "green" score in financial performance on the President's Management Agenda scorecard by providing more accessible data to support accountability, cost accounting, budget and performance integration, and management decision-making.

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$147.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$101.0) This change reflects the 1.56% rescission to all program projects combined with small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Annual Appropriations Act; CCA; CERCLA; CSA; E-Government Act of 2002; EFOIA; EPA's Environmental Statutes, and the FGCAA; FAIR; Federal Acquisition Regulations, contract law and EPA's Assistance Regulations (40CFR Parts 30, 31, 35, 40,45,46, 47); FMFIA (1982); FOIA; GMRA(1994); IPIA; IGA of 1978 and Amendments of 1988; PRA; PR; CFOA (1990); GPRA (1993); The Prompt Payment Act (1982); Title 5 USC.

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$39,740.2	$40,175.0	$39,760.0	$43,646.0	$3,886.0
Leaking Underground Storage Tanks	***$3.0***	***$3.0***	***$3.0***	***$3.0***	***$0.0***
Hazardous Substance Superfund	$5,203.0	$5,036.0	$4,969.0	$5,063.0	$94.0
Total Budget Authority / Obligations	$44,946.2	$45,214.0	$44,732.0	$48,712.0	$3,980.0
Total Workyears	298.6	296.3	296.3	304.6	8.3

Program Project Description:

LUST resources in this program support activities related to the provision of human capital and human resources management services to the entire Agency. EPA supports organizational development and management activities through Agency-wide and interagency councils and committees and through participation in interagency management improvement initiatives. The Agency continually evaluates human resource and workforce functions, employee development, leadership development, workforce planning, and succession management.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to meet the Department of Labor requirements for distributing workmen's compensation and disability.

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

Title V USC.

Program Area: Research: Land Protection

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$10,907.3	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Leaking Underground Storage Tanks	***$657.0***	***$660.0***	***$650.0***	***$413.0***	***($237.0)***
Oil Spill Response	$841.3	$901.0	$887.0	$704.0	($183.0)
Hazardous Substance Superfund	$23,859.1	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Total Budget Authority / Obligations	$36,264.7	$32,379.0	$31,896.0	$35,488.0	$3,592.0
Total Workyears	134.1	141.3	141.3	154.7	13.4

Program Project Description:

Leaking underground storage tanks (LUSTs) research addresses assessment and cleanup of leaks for fuels and various fuel additives, including methyl tertiary butyl ether (MTBE). Assessment focuses on development of source term and transport modeling modules that can be applied by state project managers. Remediation research addresses multiple remediation approaches applicable to spilled fuels, with or without oxygenates.

These research efforts are guided by the Land Multi-Year Plan (MYP)[3], developed with input from across the Agency, which outlines steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures. Specific human health risk and exposure assessments and methods are discussed and conducted under the Human Health Risk Assessment program.

The Land Protection and Restoration research program was externally reviewed by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—in FY 2006 (December 2005). The BOSC found that the program generates high quality products and conducts appropriately focused multi-disciplinary research. [4]

FY 2009 Activities and Performance Plan:

Leaking underground storage tanks (LUSTs) assessment research will focus on the development of online transport models that can be used by state project managers. Remedies being

[3] EPA, Office of Research and Development, Land Research MYP. Washington, D.C.: EPA. For more information, see http://www.epa.gov/osp/myp.htm#land
[4] BOSC Land Restoration and Preservation Research Subcommittee Report. For more information, see http://www.epa.gov/OSP/bosc/pdf/land0603rpt.pdf

investigated include active water treatment and monitored natural attenuation, with performance influenced by the nature of the fuel oxygenate.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2006 (PART) review, which was conducted under the program title "Land Protection and Restoration Research."[5] This "adequate" rating was supported by findings that the program had long-term and annual output performance measures in place that reflected the purpose of the program, as well as a strong strategic and evaluation approach. In response to OMB recommendations following the 2006 PART, the program has established a process by which the BOSC will assign a performance rating to each program long-term goal as part of its reviews. These ratings will provide the data for new program long-term outcome measures that will be instated. Using the progress rating expected from the 2008 BOSC review, the program will be able to set appropriate future year targets. Additionally, to address OMB's recommendation that the program establish an outcome-oriented efficiency measure, EPA's Research and Development program has initiated a National Academy of Sciences (NAS) study to determine the most appropriate approach. Further, to improve its collection of partner performance information, EPA's Research and Development program is updating its Policy and Procedures Manual on Extramural Resources Management to require that all research and development grants, contracts, and cooperative agreements be linked to one or more Multi-Year Plan Long-Term Goals (LTGs).

Performance Targets:

Work under this program supports EPA's Strategic Plan Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes. Performance measures for this specific program project are included under the Superfund Land Protection and Restoration program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$81.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$280.0) This reduction discontinues a fuel composition study for use in assessing potential contamination problems from leaking underground storage tanks, and studies on the effectiveness of *ex-situ* biotreatment.
- (-$38.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

BRERA; CERCLA; ERDDA; HSWA; OPA; RCRA; SARA; SWDA.

[5] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

Program Area: Underground Storage Tanks (LUST / UST)

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$9,836.7	$11,719.0	$11,572.0	$12,256.0	$684.0
Leaking Underground Storage Tanks	***$14,996.1***	***$10,558.0***	***$11,968.0***	***$10,548.0***	***($1,420.0)***
Total Budget Authority / Obligations	$24,832.8	$22,277.0	$23,540.0	$22,804.0	($736.0)
Total Workyears	112.7	131.3	131.3	132.0	0.7

Program Project Description:

The Leaking Underground Storage Tank (LUST) program promotes rapid and effective responses to releases from Federally-regulated underground storage tanks (USTs) containing petroleum and hazardous substances by enhancing state, local, and Tribal enforcement and response capability. EPA provides oversight and financial assistance for states, tribes and non-profit organizations. These efforts include providing technical information, forums for information exchange, and training opportunities to encourage program development and/or implementation. These activities support the LUST cooperative agreements, awarded by EPA to states to assist them in implementing their oversight and programmatic role.[6]

EPA works with state and Tribal UST programs to clean up LUST sites, promote innovative approaches in corrective action in order to streamline the remediation process, and measure and evaluate national program progress and performance. In addition, the Energy Policy Act[7] (EPAct) of 2005 authorized LUST Trust Fund resources to develop and implement a strategy to implement and enforce EPAct requirements concerning USTs in Indian Country.

EPA has primary responsibility for implementing the LUST program in Indian Country, and will use a portion of its LUST funding to implement the program in Indian Country, including providing tribes with financial assistance for cleanup activities.

[6] Refer to http://www.epa.gov/swerust1/20clenup.htm.
[7] Refer to http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ058.109.pdf (scroll to Title XV - Ethanol And Motor Fuels, Subtitle B – Underground Storage Tank Compliance, on pages 500-513 of the pdf file).

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to work with the states and tribes to complete LUST cleanups in an effort to reduce the backlog of 108,766 cleanups[8] not yet completed. Since the beginning of the LUST program, EPA and state programs have cleaned up approximately 77 percent (or 365,361) of all reported releases. In FY 2007, EPA and state tank programs completed 13,862 cleanups in states and territories, of which 54 cleanups were completed in Indian country.[9] For FY 2009, the program's goal for LUST cleanups is 13,000, with a subset of 30 LUST cleanups in Indian country.

EPA's LUST cleanup program priorities continue to focus on increasing the efficiency of LUST cleanups nationwide; addressing contaminants of concern; and promoting the continued use, reuse, and long-term management of LUST sites. In FY 2009, EPA will continue to help states and tribes improve LUST cleanup performance through an active, collaborative initiative with states and tribes to identify the underlying causes for the slowing pace of cleanups. EPA will work with states in better characterizing sites still requiring remediation and develop both national and state-specific strategies to overcome obstacles and accelerate cleanups. EPA also will continue its efforts to monitor the soundness of state cleanup funds, a significant source of funding for addressing LUST cleanups, and the impact of contaminants.

The EPAct requirement to develop a strategy[10] for implementing the program in Indian Country enhanced EPA's efforts and provided renewed focus to reduce the cleanup backlog and to prevent future releases in Indian Country. To address leaking USTs in Indian Country, EPA will continue to provide support for site assessments, investigations and remediation; enforcement against responsible parties; cleanup of soil and/or groundwater; alternate water supplies; and cost recovery against UST owners and operators. EPA also will continue to provide technical expertise and assistance by utilizing in-house personnel, contractors and grants/cooperative agreements to Tribal entities; response activities; oversight of responsible party lead cleanups; and support and assistance to Tribal governments.

The LUST (cleanup) program received an overall PART rating of "adequate" in 2004. As a component of the program's improvement plan, EPA created two long-term performance measures that focus on environmental outcomes to increase the number of cleanups that meet state risk-based standards for human exposure and groundwater migration, and to increase the number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian country.

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[8] U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf

[9] http://www.epa.gov/OUST/cat/ca_07_34.pdf

[10] Refer to *Strategy for an EPA/Tribal Partnership to Implement Section 1529 of the Energy Policy Act of 20005,* August 2006, EPA-510-F-06-005, http://www.epa.gov/oust/fedlaws/epact_05.htm#Final.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian Country.	30	54	30	30	cleanups

Work under this program supports EPA's objectives under Goal 3. The program tracks the annual number of cleanups that meet state risk-based standards for human exposure and groundwater migration and the annual number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian Country.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$641.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$1,600.0) This reflects funding shifted from the STAG account to the LUST account and a reduction in the additional Congressional FY 2008 Omnibus funds. This shift between the LUST appropriation and the STAG appropriation will not impact program activities.

- (-$461.0) This change reflects the net effects of restoration of the 1.56% rescission to all program projects combined with changes in IT, travel or other support costs across programs.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Reauthorization Amendments of 1986 (Subtitle I), Section 9003(h); Section 8001(a); Tribal Grants Public Law 105-276; EPAct of 2005, Title XV - Ethanol And Motor Fuels, Subtitle B - Underground Storage Tank Compliance, Sections 1521 - 1533, P.L. 109-58, 42 U.S.C. 15801.

LUST Cooperative Agreements
Program Area: Underground Storage Tanks (LUST / UST)
Goal: Land Preservation and Restoration
Objective(s): Preserve Land; Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Leaking Underground Storage Tanks	***$65,353.0***	***$58,207.0***	***$90,178.0***	***$58,207.0***	***($31,971.0)***
Total Budget Authority / Obligations	$65,353.0	$58,207.0	$90,178.0	$58,207.0	($31,971.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA provides resources to states and territories through cooperative agreements authorized under Section 9003(h) of the Solid Waste Disposal Act (SWDA) for the oversight and cleanup of petroleum releases from Underground Storage Tanks (USTs). The Agency will continue to fund research, studies and training that directly support state oversight and Leaking Underground Storage Tank (LUST) cleanup.

There are more than 108 thousand sites with confirmed releases from leaking USTs nationwide that still need to be cleaned up and approximately 630 thousand active underground storage tanks at approximately 238 thousand sites which are regulated by the UST technical regulations under Subtitle I of RCRA. Because of the size and diversity of the regulated community, state authorities are in the best position to regulate USTs and set priorities. For additional information, refer to the following site: http://www.epa.gov/swerust1/overview.htm.

States are the primary implementing agencies, except in Indian country. States use the cleanup funds provided under this program to administer their corrective action programs, oversee cleanups by responsible parties, undertake necessary enforcement actions, pay for cleanups in cases where a responsible party cannot be found or is unwilling or unable to pay for a cleanup, and recover costs from responsible parties who are unwilling to pay for cleanups.[11]

When the LUST Trust Fund is used, tank owners/operators are liable to the state for costs incurred and are subject to cost recovery actions. Approximately 40 states have UST cleanup funds that pay for most UST cleanups and are separate from the LUST Trust Fund; collectively states raise and spend more than $1 billion annually.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's LUST cleanup program will focus on increasing the efficiency of LUST cleanups nationwide. EPA will continue to work with the states to complete cleanups and reduce

[11] Refer to http://www.epa.gov/OUST/ltffacts.htm

the backlog of 108,766 cleanups[12] not yet completed. Since the beginning of the UST program, approximately 77 percent (or 365,361) of all reported releases have been cleaned up. At the FY 2009 request level, the Agency will provide not less than 80 percent of LUST appropriated funds to states to carry out specific purposes.[13] EPA will distribute the LUST funding to states under a previously established allocation process for the cleanup activities.

The LUST (cleanup) program received an overall rating of "adequate" in 2004. As a component of the program's improvement plan, EPA created two long-term performance measures that focus on environmental outcomes to increase the number of cleanups that meet state risk-based standards for human exposure and groundwater migration, and to increase the number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian country.

Performance Targets:

The program tracks the annual number of cleanups that meet state risk-based standards for human exposure and groundwater migration and the annual number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian Country.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,429.0) This change reflects restoration of the 1.56% rescission to all program projects. The restored funds will provide additional support for eligible grantees to implement the Leaking Underground Storage Tank program.

- (-$33,400.0) This reflects funding shifted from the STAG account to the LUST account and a reduction in the additional Congressional FY 2008 Omnibus funds. This shift between the LUST appropriation and the STAG appropriation will not impact program activities.

Statutory Authority:

SWDA of 1976, as amended by SARA of 1986 (Subtitle I), Section 9003(h); Section 9004(f); Section 8001(a)(1); Section 9003(h)(7) of the SWDA.

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[2] U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf.

[13] Title XV, Subtitle B of the EPAct of 2005; SWDA of 1976, as amended by the Superfund Reauthorization Amendments of 1986 (Subtitle I), Section 9004(f).

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Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification

APPROPRIATION: Oil Spill Response
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Oil Spill Response					
Budget Authority	$16,185.2	$17,280.0	$17,056.0	$17,687.0	$631.0
Total Workyears	90.7	102.2	102.2	102.2	0.0

Program Projects in Oil Spills
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Compliance					
Compliance Assistance and Centers	$267.9	$291.0	$286.0	$303.0	$17.0
Enforcement					
Civil Enforcement	$1,661.5	$2,065.0	$2,072.0	$2,233.0	$161.0
IT / Data Management / Security					
IT / Data Management	$23.8	$34.0	$33.0	$24.0	($9.0)
Oil					
Oil Spill: Prevention, Preparedness and Response	$12,890.3	$13,499.0	$13,290.0	$13,927.0	$637.0
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$447.0	$438.0	$431.0	$438.0	$7.0
Facilities Infrastructure and Operations (other activities)	$53.4	$52.0	$57.0	$58.0	$1.0
Subtotal, Facilities Infrastructure and Operations	$500.4	$490.0	$488.0	$496.0	$8.0
Subtotal, Operations and Administration	$500.4	$490.0	$488.0	$496.0	$8.0
Research: Land Protection					
Research: Land Protection and	$841.3	$901.0	$887.0	$704.0	($183.0)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Restoration					
Subtotal, Research: Land Protection and Restoration	$841.3	$901.0	$887.0	$704.0	($183.0)
TOTAL, EPA	$16,185.2	$17,280.0	$17,056.0	$17,687.0	$631.0

Program Area: Compliance

Compliance Assistance and Centers
Program Area: Compliance
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$28,226.9	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
Leaking Underground Storage Tanks	$644.1	$688.0	$709.0	$753.0	$44.0
Oil Spill Response	***$267.9***	***$291.0***	***$286.0***	***$303.0***	***$17.0***
Hazardous Substance Superfund	$11.1	$22.0	$22.0	$22.0	$0.0
Total Budget Authority / Obligations	$29,150.0	$30,548.0	$28,742.0	$27,513.0	($1,229.0)
Total Workyears	205.7	208.4	208.4	198.4	-10.0

Program Project Description:

EPA's Compliance Assistance program includes a range of activities and tools designed to improve compliance with environmental laws. Regulated entities, Federal agencies, and the public benefit from easy access to tools that help them understand these laws and find efficient, cost-effective means for putting them into practice.

This portion of the Compliance Assistance program is designed to prevent oil spills using compliance assistance and civil enforcement tools and strategies and to prepare for and respond to any oil spill affecting the inland waters of the United States. EPA's Oil Program has a long history of effective response to major oil spills, and the lessons learned have helped to improve our country's prevention and response capabilities.

FY 2009 Activities and Performance Plan:

Pursuant to the Clean Water Act (CWA) Section 311 (oil spill and hazardous substances) requirements, the Agency will continue in FY 2009 to provide compliance assistance to regulated entities to assist them in understanding their legal requirements under the CWA and provide them with cost effective compliance strategies to help prevent oil spills.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance Program from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports EPA's objective to achieve environmental protection through compliance. Currently, there are no performance measures for this specific program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$11.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$6.0) This change reflects restoration of the 1.56% rescission to all program projects

Statutory Authority:

OPA; CWA; CERCLA; PPA; NEPA; PHSA; DREAA; SDWA; Executive Order 12241; Executive Order 12656.

Program Area: Enforcement

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$123,003.7	$126,645.0	$129,886.0	$133,017.0	$3,131.0
Oil Spill Response	***$1,661.5***	***$2,065.0***	***$2,072.0***	***$2,233.0***	***$161.0***
Hazardous Substance Superfund	$739.2	$884.0	$870.0	$0.0	($870.0)
Total Budget Authority / Obligations	$125,404.4	$129,594.0	$132,828.0	$135,250.0	$2,422.0
Total Workyears	914.1	969.1	969.1	958.2	-10.9

Program Project Description:

This portion of the Civil Enforcement program is designed to prevent oil spills using civil enforcement and compliance assistance approaches, and to prepare for, and respond to, any oil spills affecting the inland waters of the United States. EPA's oil program has a long history of effective response to oil spills, including several major incidents. The lessons learned improve our country's prevention and response capabilities.[1]

FY 2009 Activities and Performance Plan:

Pursuant to Clean Water Act Section 311 (Oil Spill and Hazardous Substances) requirements, EPA's Civil Enforcement program will develop policies, issue administrative cleanup orders and/or judicial actions for injunctive relief, assess civil penalties for violations of those orders or for spills into the environment, and assist in the recovery of cleanup costs expended by the government. In FY 2009, the program also will provide support for field investigations and inspections of spills as well as Spill Control Countermeasure compliance assistance.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program from a tool-oriented to a problem-oriented GPRA strategic architecture.

[1] For more information refer to: www.epa.gov/oilspill/index.htm.

Performance Targets:

Work under this program supports EPA's objective to achieve environmental protection through compliance. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$180.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$19.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs

Statutory Authority:

OPA; CWA; CERCLA; NEPA; Pollution Prosecution Act.

Program Area: IT / Data Management / Security

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Science & Technology	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Leaking Underground Storage Tanks	$136.5	$177.0	$174.0	$162.0	($12.0)
Oil Spill Response	***$23.8***	***$34.0***	***$33.0***	***$24.0***	***($9.0)***
Hazardous Substance Superfund	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Total Budget Authority / Obligations	$119,854.2	$111,067.0	$110,496.0	$115,277.0	$4,781.0
Total Workyears	497.4	488.0	488.0	488.0	0.0

Program Project Description:

Agency offices rely on the IT/Data Management program and its capabilities to develop and implement tools for ready access to accurate and timely data. This program houses all of the critical IT infrastructure that allows rapid efficient communication exchange and storage of data, analysis and computations. It also allows access to the scientific, regulatory, and best practice infrastructure needed by agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the Research and Development and Air and Radiation offices to access scientific and program data. Because the IT/Data Management function supports the entire Agency, funds are provided in each operating appropriation including Oil.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal. The program: (1) supports the development, collection, management, and analysis of environmental data (to include both point source and ambient data) to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access; (3) manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal

guidelines; and (4) supports Regional information technology infrastructure, administrative and environmental programs, and telecommunications.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Information Technology community will continue to focus on improving the Agency's use of technology, pursuing enterprise solutions, and protecting privacy and security of data holdings while improving delivery of information and services to partners and citizens. The Agency's IT/Data Management program forms the core of this effort with its focus on building and implementing the Agency's Integrated Portal and Enterprise Content Management System (ECMS), developing Environmental Indicators, and continuing to deploy enterprise-wide IT infrastructure solutions.

The Environmental Information program's FY 2009 technology efforts have three major components:

- OEI's efforts in the areas of Analytical Capacity and Indicators are expected to help identify data gaps, and suggest areas where additional capacity is needed;
- Through use of the portal and Exchange Network, the Technology Initiative program will increase the integration of quality data, streamline transactions to foster collaboration, reduce the data entry burden, and improve decision making;
- OEI's Readiness to Serve initiative will build the capacity and infrastructure needed to allow more EPA employees to telecommute or work safely and securely in the field.

In FY 2009 the IT/Data Management Oil Spill resources continue to support EPA's Readiness to Serve infrastructure program. This program delivers secure information services to ensure that the Agency and its programs have a full range of information technology infrastructure components (e.g., user equipment, network connectivity, e-mail, application hosting, remote access) that make information accessible across the spectrum of mission needs at all locations. The program uses performance-based, outsourced services to obtain the best solutions (value for cost) for the range of program needs. This includes innovative multi-year leasing that sustains and renews technical services in a least-cost, stable manner as technology changes over time (e.g., desktop hardware, software and maintenance).

Performance Targets:

Work under this program supports multiple strategic objectives. Currently, there are no performance measures specific to this program project.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$9.0) This change reflects a redirection of costs from general expenses, contracts and grants originating in the Oil Spill portion of this program project, as well as the restoration of the 1.56% rescission to all program projects.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD, and DAA; TSCA; FIFRA; FQPA; SDWA and amendments; FFDCA; EPCRA; RCRA; SARA; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA.

Program Area: Oil

Oil Spill: Prevention, Preparedness and Response
Program Area: Oil
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Oil Spill Response	***$12,890.3***	***$13,499.0***	***$13,290.0***	***$13,927.0***	***$637.0***
Total Budget Authority / Obligations	$12,890.3	$13,499.0	$13,290.0	$13,927.0	$637.0
Total Workyears	84.0	84.0	84.0	84.0	0.0

Program Project Description:

The Oil Spill program protects U.S. waters by effectively preventing, preparing for, responding to and monitoring oil spills. EPA conducts oil spill prevention, preparedness, and enforcement activities associated with the over half million non-transportation-related oil storage facilities that EPA regulates through its spill prevention program. The Spill Prevention, Control and Countermeasures (SPCC) regulation and the Facility Response Plan (FRP) regulations establish EPA's Oil Spill program regulatory framework. In addition to its prevention responsibilities, EPA serves as the lead responder for cleanup of all inland zone spills, including transportation-related spills from pipelines, trucks, and other transportation systems. EPA accesses the Oil Spill Liability Trust Fund, administered by the U.S. Coast Guard, to obtain reimbursement for site-specific spill response activities. More than 24 thousand oil spills occur in the U.S. every year, with half of these spills occurring in the inland zone for which EPA has jurisdiction. On average, one spill of greater than 100 thousand gallons occurs every month from EPA-regulated oil storage facilities and the inland oil transportation network. For more information, refer to http://www.epa.gov/oilspill.

FY 2009 Activities and Performance Plan:

FY 2009 priorities include improvements to the Oil Spill program's regulatory requirements. In FY 2009, EPA intends to implement regulatory changes designed to clarify a number of technical issues associated with the SPCC rule requirements and to address small businesses, farms, and other sector adjustments that arose from regulatory work completed in calendar year 2006. EPA also expects to revise and update guidance that was issued to ensure it reflects current final rule requirements and input from stakeholders.

The largest oil storage facilities and refineries must prepare FRPs to identify response resources and ensure their availability in the event of a worst case discharge. FRPs establish communication, address security, identify an individual with authority to implement removal actions, and describe training and testing drills at the facility. In FY 2009, EPA will continue to review/approve FRPs and conduct inspections and exercises at an estimated 250 FRP facilities. EPA will emphasize emergency preparedness, particularly through the use of unannounced drills

and exercises, to ensure facilities and responders can effectively implement response plans. EPA also will finalize and begin using guidance for FRP inspectors.

Working with state, local and Federal officials in a given geographic location, EPA will continue to enhance the existing National Preparedness for Response Exercise Program by strengthening area contingency plans (ACPs) and Regional contingency plans. The ACPs detail the responsibilities of various parties in the event of a spill/release, describe unique geographical features, sensitive ecological resources, and drinking water intakes for the area covered, and identify available response equipment and its location. EPA conducts a small number of ACP exercises each year to evaluate and strengthen the plans.

EPA's Oil Spill program was assessed under PART in 2005 and received an overall rating of "adequate." Program performance is determined by measuring the gallons of oil spilled to navigable waters from facilities subject to EPA's FRP regulations and measuring the compliance rate of facilities with the FRP and SPCC requirements. The efficiency measure reflects long-term performance with targets set every three years. The program is also developing stronger strategic planning procedures to ensure continuous program improvement, ensuring data quality, and developing a forum to share best spill prevention practices across regions. In FY 2009, the Agency expects to initially test and set baselines for at least two new outcome performance measures to be developed during FY 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Gallons of oil spilled to navigable waters per million program dollar spent annually on prevention and preparedness at Facilty Response Plan (FRP) facilities.		no target	90,000	no target	gallons

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of inspected facilities subject to Spill Prevention, Control and Countermeasures (SPCC) regulations found to be in compliance.	40%	53	55	58	percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of inspected facilities subject to Facility Response Plan (FRP) regulations found to be in compliance.	67%	75	78	82	percent

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$905.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$268.0) This change reflects the net effect of the restoration of the 1.56% rescission across all program projects combined with technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

Federal Water Pollution Control Act as amended by the OPA of 1990. The regulatory framework includes the Oil and Hazardous Substances NCP (40 CFR Part 300) and the Oil Pollution Prevention regulation (40 CFR Part 112) which covers the SPCC, and FRP program requirements.

Program Area: Operations and Administration

Goal: Provide Agency-wide support for multiple goals to achieve their objectives. This support involves Agency-wide activities primarily provided by EPA's six (6) support offices - the Office of Administration and Resources Management (OARM), Office of the Chief Financial Officer (OCFO), Office of Environmental Information (OEI), Office of General Counsel (OGC), Office of the Administrator (OA), and the Office of Inspector General (OIG).

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Environmental Program & Management	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Science & Technology	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Building and Facilities	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Leaking Underground Storage Tanks	$848.5	$901.0	$887.0	$902.0	$15.0
Oil Spill Response	***$500.4***	***$490.0***	***$488.0***	***$496.0***	***$8.0***
Hazardous Substance Superfund	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Total Budget Authority / Obligations	$461,126.3	$480,865.0	$471,569.0	$490,551.0	$18,982.0
Total Workyears	399.2	415.9	415.9	410.6	-5.3

Program Project Description:

Oil Spill account resources in the Facilities Infrastructure and Operations Program Project are used to manage activities and support services in many centralized administrative areas such as health and safety, environmental compliance, occupational health, medical monitoring, fitness/wellness and safety, and environmental management functions at EPA. Oil appropriation resources for this program also support a full range of ongoing facilities management services including: facilities maintenance and operations; Headquarters security; space planning; shipping and receiving; property management; printing and reproduction; mail management; and transportation services. Because this program supports the entire Agency, funds are included in most appropriations.

FY 2009 Activities and Performance Plan:

- For FY 2009, the Agency is requesting a total of $438 thousand for rent and $58 thousand for transit subsidy in the Oil Spill appropriation.

- The Agency will continue to manage its lease agreements with the General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct.

- EPA will provide transit subsidy to eligible applicants as directed by Executive Order 13150[2] *Federal Workforce Transportation.*

Performance Targets:

Work under this program supports multiple strategic objectives. Performance information is included in the Program Performance and Assessment section.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$8.0) This change reflects restoration of the 1.56% rescission to all program projects, and will fund projected increases in transit subsidy costs as well as rent.

Statutory Authority:

Federal Property and Administration Services Act; Public Building Act; Annual Appropriations Act; CWA; CAA; D.C. Recycling Act of 1988; Executive Orders 10577 and 12598; Department of Justice United States Marshals Service, Vulnerability Assessment of Federal Facilities Report; Presidential Decision Directive 63 (Critical Infrastructure Protection).

[2] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html

Program Area: Research: Land Protection

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Science & Technology	$10,907.3	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Leaking Underground Storage Tanks	$657.0	$660.0	$650.0	$413.0	($237.0)
Oil Spill Response	***$841.3***	***$901.0***	***$887.0***	***$704.0***	***($183.0)***
Hazardous Substance Superfund	$23,859.1	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Total Budget Authority / Obligations	$36,264.7	$32,379.0	$31,896.0	$35,488.0	$3,592.0
Total Workyears	134.1	141.3	141.3	154.7	13.4

Program Project Description:

Land protection research in the oil spills area focuses on three aspects: test protocol development, fate and transport modeling, and remediation. EPA develops and uses these protocols for testing various spill response product classes to pre-qualify products as required by the preparedness and response requirements of the Oil Pollution Act of 1990.

Research is guided by the by the Land Multi-Year Plan (MYP)[3], developed with input from across the Agency, which outlines steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures. Testing products ensures that they work as claimed and provides access to effective means to reduce damage when an oil spill occurs. Specific human health risk and exposure assessments and methods are discussed and conducted under the Human Health Risk Assessment program.

The Land Protection and Restoration research program was externally reviewed by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of qualified, independent scientists and engineers—in FY 2006 (December 2005). The BOSC found that the program generates high quality products and conducts appropriately focused multi-disciplinary research. [4]

FY 2009 Activities and Performance Plan:

Remediation research continues on advances associated with physical, chemical, and biological risk management methods for petroleum and non-petroleum oils spilled into freshwater and marine environments as well as development of a protocol for testing solidifiers and treating oil.

[3] EPA, Office of Research and Development, Land Research MYP. Washington, DC: EPA. For more information, see

[4] BOSC Land Restoration and Preservation Research Subcommittee Report. For more information, see http://www.epa.gov/OSP/bosc/pdf/land0603rpt.pdf

Research products are presented at meetings and posted or linked on EPA's oil spills web site for use by oil spill managers.

The Office of Management and Budget (OMB) rated the program as "adequate" in its 2006 (PART) review, which was conducted under the program title "Land Protection and Restoration Research."[5] This "adequate" rating was supported by findings that the program had long-term and annual output performance measures in place that reflected the purpose of the program, as well as a strong strategic and evaluation approach. In response to OMB recommendations following the 2006 PART, the program has established a process by which the BOSC will assign a performance rating to each program long-term goal as part of its reviews. These ratings will provide the data for new program long-term outcome measures that will be instated. Using the progress rating expected from the 2008 BOSC review, the program will be able to set appropriate future year targets. Additionally, to address OMB's recommendation that the program establish an outcome-oriented efficiency measure, EPA's Research and Development program has initiated a National Academy of Sciences (NAS) study to determine the most appropriate approach. Further, to improve its collection of partner performance information, the Research and Development program is updating its Policy and Procedures Manual on Extramural Resources Management to require that all research and development grants, contracts, and cooperative agreements be linked to one or more Multi-Year Plan Long-Term Goals (LTGs).

Performance Targets:

Work under this program supports EPA's Strategic Plan Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes. Performance measures for this specific program project are included under the Superfund Land Protection and Restoration program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$15.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$200.0) This reduction discontinues an oil spill dispersant study and further work on the ERO3s model for predicting migration of contaminants from oil spills. This reduction will eliminate the planned model development to link ERO3s to existing EPA water quality and hydrodynamic models.

- (+$2.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

SWDA; HSWA; SARA; CERCLA; RCRA; OPA; BRERA.

[5] For more information, see http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification

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APPROPRIATION: State and Tribal Assistance Grants
Resource Summary Table
(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants					
Budget Authority	$3,337,543.9	$2,744,450.0	$2,937,051.0	$2,621,952.0	($315,099.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Projects in STAG
(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants (STAG)					
Infrastructure Assistance: Clean Water SRF	$1,039,998.4	$687,554.0	$689,080.0	$555,000.0	($134,080.0)
Infrastructure Assistance: Drinking Water SRF	$800,695.0	$842,167.0	$829,029.0	$842,167.0	$13,138.0
Congressionally Mandated Projects	$150,200.2	$0.0	$143,723.0	$0.0	($143,723.0)
Infrastructure Assistance: Alaska Native Villages	$34,907.5	$15,500.0	$24,610.0	$15,500.0	($9,110.0)
Brownfields Projects	$85,865.8	$89,258.0	$93,518.0	$93,558.0	$40.0
Clean School Bus Initiative	$4,523.6	$0.0	$0.0	$0.0	$0.0
Diesel Emissions Reduction Grant Program					
EPAct & Related Authorities Implemention	$0.0	$35,000.0	$49,220.0	$49,220.0	$0.0
CA Emission Reduction Project Grants	$0.0	$0.0	$9,844.0	$0.0	($9,844.0)
Subtotal, Diesel Emissions Reduction Grant Program	$0.0	$35,000.0	$59,064.0	$49,220.0	($9,844.0)
Infrastructure Assistance: Mexico Border	$96,452.7	$10,000.0	$19,688.0	$10,000.0	($9,688.0)
Subtotal, State and Tribal Assistance Grants (STAG)	$2,212,643.2	$1,679,479.0	$1,858,712.0	$1,565,445.0	($293,267.0)
Categorical Grants					
Categorical Grant: Beaches	$10,573.4	$9,900.0	$9,746.0	$9,900.0	$154.0

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Protection					
Categorical Grant: Brownfields	$50,556.9	$49,495.0	$48,723.0	$49,495.0	$772.0
Categorical Grant: Environmental Information	$15,830.8	$12,850.0	$9,844.0	$11,000.0	$1,156.0
Categorical Grant: Hazardous Waste Financial Assistance	$104,650.9	$103,346.0	$101,734.0	$103,346.0	$1,612.0
Categorical Grant: Homeland Security	$3,730.2	$4,950.0	$4,873.0	$4,950.0	$77.0
Categorical Grant: Lead	$22,935.5	$13,564.0	$13,352.0	$13,564.0	$212.0
Categorical Grant: Nonpoint Source (Sec. 319)	$209,889.6	$194,040.0	$200,857.0	$184,540.0	($16,317.0)
Categorical Grant: Pesticides Enforcement	$19,063.6	$18,711.0	$18,419.0	$18,711.0	$292.0
Categorical Grant: Pesticides Program Implementation	$13,319.3	$12,970.0	$12,768.0	$12,970.0	$202.0
Categorical Grant: Pollution Control (Sec. 106)					
Monitoring Grants	$13,246.5	$18,500.0	$18,211.0	$18,500.0	$289.0
Categorical Grant: Pollution Control (Sec. 106) (other activities)	$197,964.3	$203,164.0	$199,995.0	$203,164.0	$3,169.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	$211,210.8	$221,664.0	$218,206.0	$221,664.0	$3,458.0
Categorical Grant: Pollution Prevention	$6,121.9	$5,940.0	$4,863.0	$4,940.0	$77.0
Categorical Grant: Public Water System Supervision (PWSS)	$97,461.9	$99,100.0	$97,554.0	$99,100.0	$1,546.0
Categorical Grant: Radon	$7,915.0	$8,074.0	$7,948.0	$8,074.0	$126.0
Categorical Grant: Sector Program	$1,360.9	$2,228.0	$1,209.0	$1,828.0	$619.0
Categorical Grant: State and Local Air Quality Management	$208,567.3	$185,180.0	$216,825.0	$185,580.0	($31,245.0)
Categorical Grant: Targeted Watersheds	$4,582.0	$0.0	$9,844.0	$0.0	($9,844.0)
Categorical Grant: Toxics Substances Compliance	$5,710.3	$5,099.0	$5,019.0	$5,099.0	$80.0
Categorical Grant: Tribal Air Quality Management	$11,840.5	$10,940.0	$10,769.0	$13,300.0	$2,531.0
Categorical Grant: Tribal General Assistance Program	$61,569.8	$56,925.0	$56,037.0	$57,925.0	$1,888.0
Categorical Grant: Underground Injection Control (UIC)	$10,150.8	$10,891.0	$10,721.0	$10,891.0	$170.0
Categorical Grant: Underground Storage Tanks	$29,459.4	$22,274.0	$2,461.0	$22,800.0	$20,339.0
Categorical Grant: Wastewater Operator Training	$828.1	$0.0	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	$1,258.1	$0.0	$0.0	$0.0	$0.0

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
Categorical Grant: Wetlands Program Development	$16,313.7	$16,830.0	$16,567.0	$16,830.0	$263.0
Subtotal, Categorical Grant: Wetlands Program Development	$16,313.7	$16,830.0	$16,567.0	$16,830.0	$263.0
Subtotal, Categorical Grants	$1,124,900.7	$1,064,971.0	$1,078,339.0	$1,056,507.0	($21,832.0)
TOTAL, EPA	$3,337,543.9	$2,744,450.0	$2,937,051.0	$2,621,952.0	($315,099.0)

FY 2009 President's Budget

STAG Resources

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud
Alaskan Native Villages	$34,907.5	$15,500.0	$24,610.0	$15,500.0
Brownfields Infrastructure Projects	$85,865.8	$89,258.0	$93,518.0	$93,558.0
Clean School Bus Initiative*	$4,523.6	$0.0	$0.0	$0.0
Clean Water State Revolving Fund	$1,039,998.4	$687,554.0	$689,080.0	$555,000.0
Congressional Projects	$150,200.2	$0.0	$143,723.0	$0.0
Diesel Emission Reduction Grants	$0.0	$35,000.0	$59,064.0	$49,220.0
Drinking Water State Revolving Fund	$800,695.0	$842,167.0	$829,029.0	$842,167.0
Mexico Border	$96,452.7	$10,000.0	$19,688.0	$10,000.0
State/Tribal Categorical Grant Assistance	$1,124,900.7	$1,064,971.0	$1,078,339.0	$1,056,507.0
Rescission of Balances from Prior Years	$0.0	-$5,000.0	-$5,000.0	-$10,000.0
TOTAL	**$3,337,543.9**	**$2,739,450.0**	**$2,932,051.0**	**$2,611,952.0**

* The Clean School Bus Initiative activities are now part of the Diesel Emission Reduction Grants program.

Program Projects In STAG

(Dollars in Thousands)

Program Project	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2008 Enacted v. FY 2009 Pres Bud
Brownfields Projects	$85,865.8	$89,258.0	$93,518.0	$93,558.0	$40.0
Categorical Grant: Beaches Protection	$10,573.4	$9,900.0	$9,746.0	$9,900.0	$154.0
Categorical Grant: Brownfields	$50,556.4	$49,495.0	$48,723.0	$49,495.0	$772.0
Categorical Grant: Environmental Information	$15,830.8	$12,850.0	$9,844.0	$11,000.0	$1,156.0
Categorical Grant: Hazardous Waste Financial Assistance	$104,650.9	$103,346.0	$101,734.0	$103,346.0	$1,612.0
Categorical Grant: Homeland Security	$3,730.2	$4,950.0	$4,873.0	$4,950.0	$77.0
Categorical Grant: Lead	$22,935.5	$13,564.0	$13,352.0	$13,564.0	$212.0
Categorical Grant: Nonpoint Source (Sec. 319)	$209,889.6	$194,040.0	$200,857.0	$184,540.0	($16,317.0)
Categorical Grant: Pesticides Enforcement	$19,063.6	$18,711.0	$18,419.0	$18,711.0	$292.0
Categorical Grant: Pesticides Program Implementation	$13,319.3	$12,970.0	$12,768.0	$12,970.0	$202.0
Categorical Grant: Pollution Control (Sec. 106)	$211,210.8	$221,664.0	$218,206.0	$221,664.0	$3,458.0
Categorical Grant: Pollution Prevention	$6,121.9	$5,940.0	$4,863.0	$4,940.0	$77.0
Categorical Grant: Public Water System Supervision (PWSS)	$97,461.9	$99,100.0	$97,554.0	$99,100.0	$1,546.0
Categorical Grant: Radon	$7,915.0	$8,074.0	$7,948.0	$8,074.0	$126.0
Categorical Grant: Sector Program	$1,360.9	$2,228.0	$1,209.0	$1,828.0	$619.0
Categorical Grant: State and Local Air Quality Management	$208,567.3	$185,180.0	$216,825.0	$185,580.0	($31,245.0)
Categorical Grant: Targeted Watersheds	$4,582.0	$0.0	$9,844.0	$0.0	($9,844.0)
Categorical Grant: Toxics Substances Compliance	$5,710.3	$5,099.0	$5,019.0	$5,099.0	$80.0
Categorical Grant: Tribal Air Quality Management	$11,840.5	$10,940.0	$10,769.0	$13,300.0	$2,531.0
Categorical Grant: Tribal General Assistance Program	$61,569.8	$56,925.0	$56,037.0	$57,925.0	$1,888.0
Categorical Grant: Underground Injection Control (UIC)	$10,150.8	$10,891.0	$10,721.0	$10,891.0	$170.0
Categorical Grant: Underground Storage Tanks	$29,459.4	$22,274.0	$2,461.0	$22,800.0	$20,339.0
Categorical Grant: Wastewater Operator Training	$828.1	$0.0	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	$1,258.1	$0.0	$0.0	$0.0	$0.0

Categorical Grant: Wetlands Program Development	$16,313.7	$16,830.0	$16,567.0	$16,830.0	$263.0
Clean School Bus Initiative*	$4,523.6	$0.0	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$150,200.2	$0.0	$143,723.0	$0.0	($143,723.0)
Diesel Emission Reduction Grants	$0.0	$35,000.0	$59,064.0	$49,220.0	($9,844.0)
Infrastructure Assistance: Alaska Native Villages	$34,907.5	$15,500.0	$24,610.0	$15,500.0	($9,110.0)
Infrastructure Assistance: Clean Water SRF	$1,039,998.4	$687,554.0	$689,080.0	$555,000.0	($134,080.0)
Infrastructure Assistance: Drinking Water SRF	$800,695.0	$842,167.0	$829,029.0	$842,167.0	$13,138.0
Infrastructure Assistance: Mexico Border	$96,452.7	$10,000.0	$19,688.0	$10,000.0	($9,688.0)

*Clean School Bus Initiative activities are now part of the Diesel Emission Reduction Grants program.

INFRASTRUCTURE / STAG PROJECT FINANCING

Infrastructure and Special Projects Funds

The 2009 President's Budget includes a total of $1.565 billion for EPA's Infrastructure programs in the State and Tribal Assistance Grant (STAG) account. Approximately $1.413 billion will support EPA's Goal 2: Clean and Safe Water; $103.6 million will support EPA's Goal 4: Healthy Communities and Ecosystems; and $49.2 million will support Goal 1: Clean Air and Global Climate Change.

Infrastructure and targeted projects funding under the STAG appropriation provides financial assistance to states, municipalities, interstates, and Tribal governments to fund a variety of drinking water, wastewater, air and Brownfields environmental projects. These funds are essential to fulfill the Federal government's commitment to help our state, Tribal and local partners obtain adequate funding to construct the facilities required to comply with Federal environmental requirements and ensure public health and revitalize contaminated properties.

Providing STAG funds to capitalize State Revolving Fund (SRF) programs, EPA works in partnership with the states to provide low-cost loans to municipalities for infrastructure construction. As set-asides of the SRF programs, grants are available to Indian tribes and Alaska Native Villages for drinking water and wastewater infrastructure needs based on national priority lists. The Brownfields Environmental Program provides states, tribes, and political subdivisions (including cities, towns, and counties) the necessary tools, information, and strategies for promoting a unified approach to environmental assessment, cleanup, characterization, and redevelopment at sites contaminated with hazardous wastes and petroleum contaminants.

The resources included in this budget will enable the Agency, in conjunction with EPA's state, local, and Tribal partners, to achieve several important goals for 2009. Some of these goals include:

- 90 percent of the population served by community water systems will receive drinking water meeting all health-based standards.

- Award 107 assessment grants under the Brownfields program, bringing the cumulative total grants awarded to more than 1,260 by the end of FY 2009 and paving the way for productive reuse of these properties. Brownfields grantees will also leverage 3,800 cleanup and redevelopment jobs and $685 million in cleanup and redevelopment funding.

Goal 1: Clean Air and Global Climate Change

Diesel Emissions Reduction Grant Program

In FY 2009, EPA will support the National Clean Diesel program, authorized in Sections 791-797 of the Energy Policy Act of 2005. This program focuses on reducing particulate matter (PM) by up to 95% from existing diesel engines, including on-highway and non-road equipment

and reducing other, smog-forming emissions such as nitrogen oxides and hydrocarbons. Five sectors are targeted for reduction: freight, construction, school buses, agriculture, and ports. Grants will be provided to eligible entities in areas of the country that are not meeting ambient air quality standards. This program will help provide immediate reductions by retrofitting the engines with emission control technologies sooner than would otherwise occur through normal turnover of the fleet because these engines often remain in service for 20 or more years. In 2009, EPA will issue and manage various categories of Diesel Emission Reduction grants. 70 percent of the total funding available will be used to establish: 1) competitive National Clean Diesel Campaign (NCDC) grants to directly fund and/or finance retrofits, rebuilds, and replacement as well as fuel switching and fuel efficiency measures associated with diesel trucks, ships, school buses and other diesel equipment,; 2) up to 10 percent of those funds used to establish grants to advance emerging diesel emission reduction technologies, with a focus on new technologies applicable to ocean-going vessels, harbor craft, and goods movement; and 3) competitive grants to help qualifying entities (states, local governments, ports, etc.) create innovative Air Quality Finance Authorities/Programs (AQFAs) that provide low cost, flexible loans for the purchase of new and cleaner used equipment, as recommended by the Agency's Environmental Finance Advisory Board (EFAB). 30 percent of the total funding available will be used in formula grants to states to implement state diesel emission reduction programs defined under the Diesel Emission Reduction Act (DERA). These funds will support EPA's Strategy for Sustainable Ports. The Ports initiative is comprised of many of the strategies and technologies implemented through all four aspects of the Diesel Emission Reduction Program, as noted above. Through this initiative EPA will reduce supply chain emissions associated with the movement of goods through ports.

Goal 2: Clean and Safe Water

Capitalizing Clean Water and Drinking Water State Revolving Funds

The Clean Water and Drinking Water State Revolving Fund programs demonstrate a true partnership between states, localities and the Federal government. These programs provide Federal financial assistance to states, localities, and Tribal governments to protect the nation's water resources by providing funds for the construction of drinking water and wastewater treatment facilities. The state revolving funds are two 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.

EPA will continue to provide financial assistance for wastewater and other water projects through the Clean Water State Revolving Fund (CWSRF). CWSRF projects include nonpoint source, estuary, storm water, and sewer overflow projects. The dramatic progress made in improving the quality of wastewater treatment since the 1970s is a national success. In 1972, only 84 million people were served by secondary or advanced wastewater treatment facilities. Today, 99 percent of community wastewater treatment plants, serving 181 million people, use secondary treatment or better. Water infrastructure projects supported by the program contribute to direct ecosystem improvements by lowering the amount of nutrients and toxic pollutants in all

types of surface waters. While great progress has been made, many rivers, lakes and ocean/coastal areas still suffer an enormous influx of pollutants after heavy rains. The contaminants result in beach closures, infect fish and degrade the ability of the watersheds to sustain a healthy ecosystem.

The FY 2009 request includes $555.0 million in funding for the CWSRF. Approximately $26 billion has been provided to capitalize the CWSRF, more than three times the original Clean Water Act authorized level of $8.4 billion. Total CWSRF funding available for loans since 1988 through June 2007, reflecting loan repayments, state match dollars, and other funding sources, exceeds $65 billion, of which $63 billion has been provided to communities as financial assistance. The following table illustrates the long-term financial picture for the CWSRF:

Annual Federal Capitalization	Revolving Level	Time Span
$555 million through 2011 ($6.8 billion total, 2004-2011)	$3.4 billion (in 2001 $)	2015 through 2040

The DWSRF is designed to be self-sustaining over time and will help offset the costs of ensuring safe drinking water supplies and assisting small communities in meeting their responsibilities. Since its inception in 1997, the Drinking Water State Revolving Fund (DWSRF) program has made available $12.8 billion to finance 4,985 infrastructure improvement projects nationwide, with a return of $1.73 for every $1 of Federal funds invested. As of June 30, 2007, $8.1 billion in capitalization grants have been awarded, amounting to loans/assistance of $12.6 billion. The following table illustrates the long-term financial picture for the DWSRF:

Annual Federal Capitalization	Revolving Level	Time Span
$842 million through 2018	$1.2 billion (in 2001 $)	2019 through 2039

Set-Asides for Tribes: To improve public health and water quality on Tribal lands, the Agency will continue the 1 ½ percent CWSRF set-aside for funding wastewater grants to tribes as provided in the Agency's 2002 appropriation. The 2002 World Summit in Johannesburg adopted the goal of reducing the number of people lacking access to basic sanitation by 50 percent by 2015. Through this program, EPA contributes to this goal which will provide for the development of sanitation facilities for tribes and Alaska Native Villages.

Private Activity Bonds

Included in the President's Budget is a proposal to exempt Private Activity Bonds (PABs) used to finance drinking water and wastewater infrastructure from the private activity bond unified state volume cap. PABs are tax-exempt bonds issued by a State or local government, the proceeds of which are used by another entity for a public purpose or by the government entity itself for certain public-private partnerships. By removing drinking water and wastewater bonds from the volume cap, this proposal will provide States and communities greater access to PABs to help finance their water infrastructure needs and increase capital investment in the Nation's water infrastructure.

This Water Enterprise Bond proposal would provide an exception to the unified annual State volume cap on tax-exempt qualified private activity bonds for exempt facilities for the "furnishing of water" or "sewage facilities." To ensure the long-term financial health and solvency of these drinking water and wastewater systems, communities using these bonds must have demonstrated a process that will move towards full-cost pricing for services within five years of issuing the Private Activity Bonds. This will help water systems become self-financing and minimize the need for future subsidies.

Alaska Native Villages

The President's Budget provides $15.5 million for Alaska native villages for the construction of wastewater and drinking water facilities to address serious sanitation problems. EPA will continue to work with the Department of Health and Human Services' Indian Health Service, the State of Alaska, the Alaska Native Tribal Health Council and local communities to provide needed financial and technical assistance.

Goal 4: Healthy Communities and Ecosystems

Brownfields Environmental Projects

The President's Budget includes $93.6 million for Brownfields environmental projects. EPA will award grants for assessment activities, cleanup, and revolving loan funds (RLF). Additionally, this includes cleanup of sites contaminated by petroleum or petroleum products and environmental job training grants. In FY 2009, the funding provided will result in the assessment of 1,000 Brownfields properties. Using EPA grant dollars, the brownfields grantees will leverage cleanup and redevelopment jobs and $900 million in cleanup and redevelopment funding.

Mexico Border

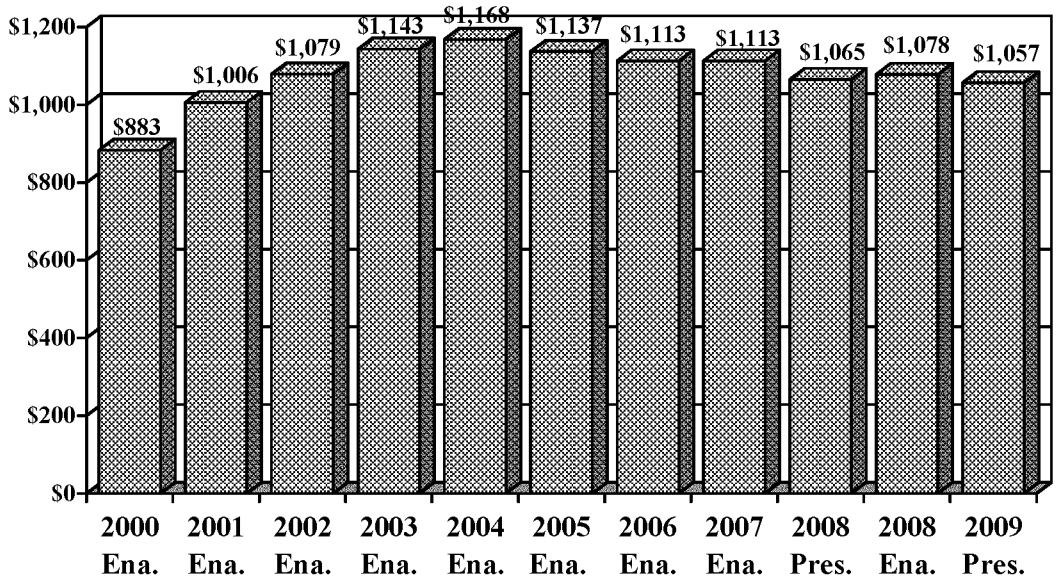
The President's Budget includes a total of $10.0 million for water infrastructure projects along the U.S./Mexico Border. The goal of this program is to reduce environmental and human health risks along the U.S./Mexico Border. EPA's U.S./Mexico Border program provides funds to support the planning, design and construction of high priority water and wastewater treatment projects along the border. The Agency's goal is to provide protection of people in the U.S.-Mexico border area from health risks by increasing the number of homes connected to potable water supply and wastewater collection and treatment systems.

Rescission of Balances from Prior Years

EPA will continue to review old unliquidated obligations for potential rescission. In FY 2009, EPA will rescind $10.0 million from no longer viable projects.

CATEGORICAL GRANTS PROGRAM (STAG)

(Dollars in millions)



*Does not account for the 2006 $80.0 million rescission.

Categorical Grants

In FY 2009, EPA requests a total of $1.057 billion for 21 "categorical" program grants for state, interstate organizations, non-profit organizations, intertribal consortia, and Tribal governments. EPA will continue to pursue its strategy of building and supporting state, local and Tribal capacity to implement, operate, and enforce the Nation's environmental laws. Most environmental laws envision establishment of a decentralized nationwide structure to protect public health and the environment. In this way, environmental goals will ultimately be achieved through the actions, programs, and commitments of state, Tribal and local governments, organizations and citizens.

In FY 2009, EPA will continue to offer flexibility to state and Tribal governments to manage their environmental programs as well as provide technical and financial assistance to achieve mutual environmental goals. First, EPA and its state and Tribal partners will continue implementing the National Environmental Performance Partnership System (NEPPS). NEPPS is designed to allow states more flexibility to operate their programs, while increasing emphasis on measuring and reporting environmental improvements. Second, Performance Partnership Grants (PPGs) will continue to allow states and tribes funding flexibility to combine categorical program grants to address environmental priorities.

Also, to help improve EPA's grants management, the Agency is working with the states to establish a standardized template for states to use in developing and submitting their workplans for continuing environmental program grants. Based on experience with initial template

strategies gained in FY 2007 and FY 2008, EPA will continue to partner with states on implementation in FY 2009.

HIGHLIGHTS:

State & Local Air Quality Management, Radon, and Tribal Air Quality Management Grants

The FY 2009 request includes $207.0 million for Air State and Local Assistance grants to support state, local, and Tribal air programs, as well as radon programs. Grant funds for State and Local Air Quality Management and Tribal Air Quality Management are requested in the amounts of $185.6 million and $13.3 million, respectively. These funds provide resources to multi-state, state, local, and Tribal air pollution control agencies for the development and implementation of programs for the prevention and control of air pollution or for the implementation of national ambient air standards set to protect public health and the environment. In FY 2009, EPA will continue to work with state and local air pollution control agencies to develop or implement state implementation plans (SIPs) for the 8-hour ozone standard, the fine particle (PM-2.5) standard, and regional haze. States submitted the 8-hour ozone SIPs to EPA in FY 2007 and will continue with their implementation in FY 2009. In FY 2009 states will also continue to work on implementation of their PM-2.5 and regional haze SIPs. EPA will work with Federally-recognized Tribal governments nationwide to continue development and implementation of tribal air quality management programs. Tribes are active in protection of the 4% of the land mass of the United States over which they have sovereignty, and work closely with EPA to monitor criteria pollutants and air toxics. Tribes participate extensively in national monitoring networks, and operate and report data from over 300 monitors. Grants also will be provided to states ($3.9 million) and tribes ($2.4 million) to help them work with sources to permit new energy projects and ensure that all Federal environmental laws are considered in the permitting activity. Lastly, this request includes $8.1 million for Radon grants to continue to focus efforts on priority activities to achieve health risk reduction.

Pesticide Enforcement, Toxics Substance Compliance, & Sector Program Grants

The FY 2009 request includes $25.6 million to build environmental enforcement partnerships with states and tribes and to strengthen their ability to address environmental and public health threats. The enforcement state grants request consists of $18.7 million for Pesticides Enforcement, $5.1 million for Toxic Substances Enforcement Grants, and $1.8 million for Sector Grants. State and Tribal enforcement grants will be awarded to assist in the implementation of 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.

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. Under the Toxic Substances Compliance Grant program, states receive funding for compliance inspections of asbestos and polychlorinated

biphenyls (PCBs). States also received funding for implementation of the state lead-base paint certification and training, and abatement notification compliance and 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. Under the Sector program grants, EPA builds environmental partnerships with states and tribes to strengthen their ability to address environmental and public health threats, including contaminated drinking water, pesticides in food, hazardous waste, toxic substances, and air pollution. These grants also support state agencies implementing authorized, delegated, or approved environmental programs.

Pesticides Program Implementation Grants

The FY 2009 request includes $13.0 million for Pesticides Program Implementation grants. These resources will assist states, tribes, and partners with pesticide worker safety activities, protection of endangered species and water sources, and promotion of environmental stewardship approaches to pesticide use. In addition, the Agency provides grants to promote stronger Tribal pesticide programs. EPA's mission as related to pesticides is to protect human health and the environment from pesticide risk and to realize the value of pesticide availability by considering the economic, social and environmental costs and benefits of the use of pesticides. Pesticides Program Implementation Grants help state programs stay current with changing requirements.

Lead Grants

The FY 2009 request includes $13.6 million for Lead grants. This funding will support the development of authorized programs, including work under the new Lead Rule, in both states and tribes to prevent lead poisoning through the training of workers who remove lead-based paint, the accreditation of training programs, the certification of contractors, and renovation education programs. Another activity that this funding will support is the collection of lead data to determine the nature and extent of the lead problem within an area so that states, tribes and the Agency can better target remaining areas of high risk. In FY 2009, EPA expects to reduce the number of child lead poisoning cases to 90,000 which would put the Agency on target to eliminate childhood lead poisoning as a public health concern by 2010.

In FY 2009, EPA will continue to award Targeted Grants to Reduce Childhood Lead Poisoning. These grants are available to a wide range of applicants, including state and local governments, Federally-recognized Indian tribes and intertribal consortia, territories, institutions of higher learning, and nonprofit organizations. In addition, EPA will continue a grant program initiated in FY 2007 which focuses on low-income communities through grants to national organizations engaged in working with these communities. This grant program is designed to help national and community organizations reach under-served populations that may have a disproportionate number of children with elevated blood lead levels.

Pollution Prevention Grants

The FY 2009 request includes $4.9 million for Pollution Prevention grants. The program provides grant funds to deliver technical assistance to small and medium-sized businesses. The goal is to assist businesses and industries with identifying improved environmental strategies and solutions for reducing waste at the source. The program demonstrates that source reduction can be a cost-effective way of meeting or exceeding Federal and state regulatory requirements. In FY 2009, EPA is targeting a reduction of 494 million pounds of hazardous material, 1,792 million gallons of water conserved, $68 million saved through reduction in pollution and 1,581 billion BTUs conserved.

Environmental Information Grants

In FY 2009, EPA requests $11.0 million to continue the Environmental Information Exchange Network (Exchange Network) grant program. Started in 2002, the Exchange Network grant program provides states, territories, and tribes with assistance developing the information management and technology (IM/IT) capabilities they need to take full advantage of the potential benefits provided by the Exchange Network. Enhancing and expanding the Network improves environmental decision making and improves data quality, timeliness and accessibility while reducing the burden on those who provide it. Now that all 50 states, seven tribes, and one territory have nodes, the emphasis in FY 2009 has shifted from building-out IT infrastructure to upgrading technology and expanding environmental information management and exchange. Exchange Network grants also support the work of the Environmental Council of the States and the National Congress of American Indians, both of which are representatives of their respective environmental communities as well as conveners and information disseminators.

State and Tribal Underground Storage Tanks Program

The FY 2009 request includes $22.8 million for Underground Storage Tank (UST) grants. In FY 2009, EPA will make grants to states under Section 2007 of the Solid Waste Disposal Act, available to support core program activities as well as the leak prevention activities under Title XV, Subtitle B of the Energy Policy Act of 2005 (EPAct).

In FY 2009, EPA will continue to focus attention on the need to bring all UST systems into compliance and keep them in compliance with the release detection and release prevention requirements. States will continue to use the UST categorical grant funding to implement their leak prevention and detection programs. Specifically with the UST categorical grants, states will fund such activities as seeking State Program Approval to operate the UST program in lieu of the Federal program, approving specific technologies to detect leaks from tanks, ensuring tank owners and operators are complying with notification requirements, and addressing equipment compatibility issues. EPA also will assist the states in implementing the EPAct provisions ensuring that states are developing operator training by August 8, 2009. In addition, EPA will use funds for direct implementation of release detection or release prevention (spill, overfill, and corrosion protection requirements) programs on Tribal lands where EPA carries out the UST program.

Hazardous Waste Financial Assistance Grants

In FY 2009, EPA requests $103.3 million for Hazardous Waste Financial Assistance grants. Hazardous Waste Financial Assistance grants are used for the implementation of the Resource Conservation and Recovery Act (RCRA) hazardous waste program, which includes permitting, authorization, waste minimization, enforcement, and corrective action activities. In FY 2009, EPA expects to increase the number of hazardous waste facilities with new or updated controls to prevent release by 100 facilities.

By the end of FY 2009, EPA and the authorized states also will control human exposures to contamination at 60 RCRA corrective action facilities (from our 2008 baseline of 3,746). Controlling migration of contaminated groundwater at 60 of these facilities and completing the construction of final remedies at 100 of these facilities also are targeted for FY 2009.

Brownfields Grants

In FY 2009, EPA requests $49.5 million to continue the Brownfields grant program that provides assistance to states and tribes to develop and enhance their state and Tribal response programs. This funding will help states and tribes develop legislation, regulations, procedures, and guidance, to establish or enhance the administrative and legal structure of their response programs. In addition, grant funding will support technical outreach to address environmental justice issues and Brownfields research.

Water Pollution Control (Clean Water Act Section 106) Grants

The FY 2009 EPA request includes $221.7 million for Water Pollution Control grants. These funds improve water quality standards through National Pollution Discharge Elimination System (NPDES) permitting, enhanced water quality monitoring activities and Total Maximum Daily Load (TMDL) development. EPA will work with states to implement the new rules governing discharges from Concentrated Animal Feeding Operations (CAFOs). States and authorized tribes will continue to review and update their water quality standards as required by the Clean Water Act. The Agency's goal is that 83 percent of state submissions will be approvable in 2009. EPA also encourages states to continually review and update the water quality criteria in their standards to reflect the latest scientific information from EPA and other sources. EPA's goal for 2009 is that 68 percent of states will have updated their standards to reflect the latest scientific information in the past three years. In FY 2009, $18.5 million will be designated for states and tribes that participate in collecting statistically valid water monitoring data and implement enhancements in their water monitoring programs.

Wetlands Grants

In FY 2009, the request includes $16.8 million for Wetlands Program grants. Through Wetlands Program Development Grants, states, tribes, and local governments receive technical and financial assistance that will support the Administration's goal of protecting, restoring, and enhancing 3 million acres of wetlands. These grants will do this through the development and

implementation of state and Tribal wetland programs that improve water quality in watersheds throughout the country as well as assist private landowners, educate local governments, and monitor and assess wetland quantity and quality.

Public Water System Supervision Grants

In FY 2009, EPA requests $99.1 million for Public Water System Supervision (PWSS) grants. These grants provide 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. In FY 2009, the Agency will emphasize that states use their PWSS funds to ensure that drinking water systems of all sizes achieve or remain in compliance and drinking water systems of all sizes are meeting new regulatory requirements, *e.g.*, Long Term 2 Enhanced Surface Water Treatment Rule and Ground Water Rule.

Tribal General Assistance Program Grants

In FY 2009, EPA's request includes $57.9 million for the Tribal General Assistance Program (GAP) to help Federally-recognized tribes and intertribal consortia develop, implement and assume environmental programs. In FY 2009, 91% of Federally-recognized tribes and intertribal consortia, 526 out of a universe of 572 eligible entities, will have access to an environmental presence.

Homeland Security Grants

In FY 2009, the request includes $5.0 million for Homeland Security grants to support states' efforts to work with drinking water and wastewater systems to develop and enhance emergency operations plans; conduct training in the implementation of remedial plans in small systems; and develop detection, monitoring and treatment technology to enhance drinking water and wastewater security. Fifty-six states and territories are eligible for Homeland Security grants.

Underground Injection Control (UIC) Grants

The FY 2009, EPA requests $10.9 million for the Underground Injection Control grants program. Ensuring safe underground injection of waste materials is a fundamental component of a comprehensive source water protection program. Grants are provided to states that have primary enforcement authority (primacy) to implement and maintain UIC programs. EPA and the states will continue to address Classes I, II, and III existing wells determined to be in significant violation and Class V wells determined to be in violation in FY 2009. EPA and the states also will close or permit Motor Vehicle Waste Disposal wells (Class V) identified during FY 2009. In addition, states and EPA will process UIC permit applications for experimental carbon sequestration projects and gather information from these pilots to facilitate the permitting of large scale commercial carbon sequestration in the future.

BEACH Act Grants

The FY 2009 request includes $9.9 million for the 35 states and territories with Great Lakes or coastal shorelines to protect public health at the Nation's beaches. The Beaches Environmental Assessment and Coastal Health Act (BEACH Act) of October 2000 authorizes EPA to award grants to help eligible states and territories develop and implement beach bacteria monitoring and notification programs. These programs inform the public about the risk of exposure to disease-causing microorganisms in coastal waters (including the Great Lakes).

Non-Point Source Program Grants (NPS – Clean Water Act Section 319)

In FY 2009, EPA requests $184.6 million for Non-Point Source Program grants to states, territories, and tribes. These grants enable states to use a range of tools to implement their programs including: both non-regulatory and regulatory programs, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects. The request also eliminates the statutory one-third of one-percent cap on Clean Water Act Section 319 Non-point Source Pollution grants that may be awarded to tribes. EPA's goal is to reduce annually the amount of runoff of phosphorus, nitrogen, and sediment through 319-funded projects by 4.5 million pounds, 8.5 million pounds, and 700,000 tons, respectively.

Program Area: State and Tribal Assistance Grants (STAG)

Infrastructure Assistance: Clean Water SRF
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$1,039,998.4***	***$687,554.0***	***$689,080.0***	***$555,000.0***	***($134,080.0)***
Total Budget Authority / Obligations	$1,039,998.4	$687,554.0	$689,080.0	$555,000.0	($134,080.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Clean Water State Revolving Fund (CWSRF) program provides funds to capitalize state revolving loan funds that finance infrastructure improvements for public wastewater systems and projects to improve water quality. The CWSRF is the largest source of Federal funds for states to provide loans and other forms of assistance for construction of wastewater treatment facilities, implementation of nonpoint source management plans, and development and implementation of estuary conservation and management plans. This program also includes a provision for a set-aside of funding for tribes to better address serious water infrastructure problems and attendant health impacts. The Federal investment is designed to be used in concert with other sources of funds to address water quality needs. (See http://www.epa.gov/owm/cwfinance/cwsrf for more information.)

State CWSRFs provide low interest loans to help finance wastewater treatment facilities and other water quality projects. These projects are critical to the continuation of the public health and water quality gains of the past 30 years. As of early 2008, the Federal government had invested about $26 billion in the state CWSRFs. The revolving nature of the funds and substantial additions from states has magnified that investment to make available $65 billion for loans since the program's inception.[1] The CWSRF program measures and tracks the average national rate at which available funds are loaned, assuring that the fund is working hard to support water quality infrastructure.

FY 2009 Activities and Performance Plan:

Recognizing the substantial remaining need for wastewater infrastructure, EPA will provide annual capitalization to the CWSRFs through 2011, meeting its total capitalization target of $6.8 billion for 2004-2011. This continued Federal investment, along with other traditional sources of financing (including increased local revenues), will result in substantial progress toward addressing the nation's wastewater treatment needs, significantly contributing to the long-term

[1] Clean Water State Revolving Fund National Information Management System. US EPA, Office of Water, National Information Management System Reports: Clean Water State Revolving Fund (CWSRF). Washington, DC.

environmental goal of watersheds attaining designated uses. EPA continues to work with states to meet several key objectives: fund projects designed as part of an integrated watershed approach, link projects to environmental results, and maintain the CWSRFs' excellent fiduciary condition.

The 2002 World Summit in Johannesburg adopted the goal of reducing the number of people lacking access to safe drinking water and basic sanitation by 50 percent by 2015. EPA will support this goal through the CWSRF Indian Set-Aside, which will provide for the development of sanitation facilities for tribes.

The Clean Water State Revolving Fund Grant Program underwent a PART assessment in 2003 and received an "adequate" rating. The PART review called for improved measures that capture the broad range of public health and environmental benefits provided by the program. In response, EPA has worked with its state partners to develop improved performance measures that link CWSRF financing to the protection and restoration of our nation's waters. This effort led to the development of a new CWSRF benefits reporting system designed to track progress in meeting the public health and environmental goals of the program.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative).	1,409	1,166	1,550	1,660	Number of Segments

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards			86	86	Percent POTWs

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Fund utilization rate for the CWSRF.	96.7	93.4	93.5	93.7	Rate

Nationally since 2001, fund utilization has remained relatively stable and strong at over 90 percent. The national ratio is an aggregate of fund activity in the 51 individual CWSRF programs (50 states and Puerto Rico). As such, small year-to-year fluctuations in the value of the national

ratio are to be expected and reflect annual funding decisions made by each state based on its assessment and subsequent prioritization of state water quality needs and the availability of financial resources. The Agency expects the loan commitment rate to continue to be strong. In addition, because the total capitalization remains approximately the same, the program is projected to meet its long-term revolving level target of $3.4 billion.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$134,080.0) This total is the net of the FY 2008 Omnibus 1.56% rescission and the FY 2009 budget request of $555.0 million for the CWSRF. At this funding level, the total capitalization provided between fiscal years 2004 and 2011 will total $6.8 billion. This is in line with the Administration policy established in the 2004 Budget. Because total capitalization remains the same, the program is expected to reach its long-term revolving level target of $3.4 billion.

Statutory Authority:

CWA.

Infrastructure Assistance: Drinking Water SRF
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$800,695.0***	***$842,167.0***	***$829,029.0***	***$842,167.0***	***$13,138.0***
Total Budget Authority / Obligations	$800,695.0	$842,167.0	$829,029.0	$842,167.0	$13,138.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Drinking Water State Revolving Fund (DWSRF) is designed to support states in helping public water systems finance the costs of infrastructure improvements needed to achieve or maintain compliance with Safe Drinking Water Act (SDWA) requirements and to protect public health. To reduce occurrences of serious public health threats and to ensure safe drinking water nationwide, EPA is authorized to make capitalization grants to states, so that they can provide low-cost loans and other assistance to eligible public water systems. The program emphasizes that states should provide funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water. The DWSRF is a key component of the EPA's sustainable infrastructure initiative.

The Federal investment is designed to be used in concert with other sources of funds to address water quality needs. Capitalization grant funds also may be used by states to provide other types of assistance that promote prevention and encourage stronger drinking water system management programs. These optional state set-asides could potentially equal 31 percent of the state's capitalization grant. However, historically the states have set-aside a total of 16 percent of the funds awarded to them. For fiscal years 2006-2009, appropriated funds are allocated to the states in accordance with each state's proportion of total drinking water infrastructure need as determined by the 2003 Needs Survey and Assessment,[2] with the statutory constraint that each state and the District of Columbia receive no less than one percent of the allotment and the Virgin Islands and Pacific Trust Territories together receive 0.33 percent.

Prior to allotting funds to the states, EPA is required by Section 1452(o) of the Safe Drinking Water Act (SDWA), as amended, to set-aside $2 million to pay the costs of small system monitoring for unregulated contaminants. EPA also reserves 1.5 percent of appropriated funds for Indian tribes and Alaska Native Villages, in accordance with Section 1452(i) of SDWA, as amended. These funds are awarded either directly to tribes or, on behalf of tribes, to the Indian Health Service through Interagency Agreements.

[2] Available at: http://www.epa.gov/safewater/needssurvey/pdfs/2003/report_needssurvey_2003.pdf.

(See http://www.epa.gov/safewater/dwsrf.html for more information.)

FY 2009 Activities and Performance Plan:

Providing drinking water that meets health safety standards often requires an investment in the construction or maintenance of drinking water infrastructure. The DWSRF program supports states in helping public water systems fund infrastructure improvements needed to protect public health and achieve or maintain compliance with the SDWA. Through this program, states offer low interest loans to help public water systems across the nation make improvements or upgrades to their infrastructure. Also, the DWSRF provides additional financial support to small and disadvantaged communities through low or zero-interest loans. Every state that administers DWSRF funds 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. For FY 2009, the DWSRF program has set a target of providing over 445 additional infrastructure improvement projects to public water systems.

The DWSRF Program underwent a PART assessment in 2002 and a reassessment in 2004. The program received a rating of "adequate" in 2004. The reassessment of the DWSRF program found that it had implemented acceptable performance measures. The program also tracks the national long-term average revolving level of the fund to assess long-term sustainability.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Number of additional projects initiating operations.	438	430	440	445	Projects

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Fund utilization rate for the DWSRF.	88	85	86	89	Rate

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	91.5	94	90	90	Percent Population

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89	89	89.5	90	Percent Systems

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$13,138.0) This change reflects restoration of the 1.56% rescission to all program projects. Funding will ensure that the Drinking Water SRF is on track to meet its long-term revolving level target of $1.2 billion.

Statutory Authority:

SDWA.

Infrastructure Assistance: Alaska Native Villages
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$34,907.5***	***$15,500.0***	***$24,610.0***	***$15,500.0***	***($9,110.0)***
Total Budget Authority / Obligations	$34,907.5	$15,500.0	$24,610.0	$15,500.0	($9,110.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Alaska Rural and Native Village (ANV) Program addresses the lack of basic drinking water and sanitation infrastructure (*i.e.*, flushing toilets and running water) in rural and Native Alaska communities. In many of these communities, honeybuckets and pit privies are the sole means of sewage collection and disposal. EPA's grant to the State of Alaska provides funding to improve or construct drinking water and wastewater treatment facilities for these communities and thereby improve local health and sanitation conditions. This program also supports training, technical assistance, and educational programs related to the financial management and operation and maintenance of sanitation systems.

(See http://www.epa.gov/owm/mab/indian/anvrs.htm for more information.)

FY 2009 Activities and Performance Plan:

The ANV Program is administered by the State of Alaska and provides infrastructure funding to Alaska Native Villages and rural Alaska communities which lack access to basic sanitation. The FY 2009 investment of $15.5 million will leverage funding to provide an additional 500 to 900 homes in rural Alaska with wastewater service and drinking water that meets public health standards. In FY 2009, the Agency will continue to work with the State of Alaska to address sanitation conditions and determine how to maximize the Federal investment in rural Alaska. EPA will be implementing its ANV "Management Controls Policy" (adopted in June 2007) to assure that funds are used efficiently by allocating them to projects that are ready to proceed or progressing satisfactorily. The Agency also will develop a plan to institutionalize the management framework of this program to ensure continued program effectiveness.

The Agency has made great strides in implementing more focused and intensive oversight of the Alaska Native Village grant program through cost analyses, post-award monitoring and project close-out. EPA also collaborated with Alaska to establish program goals and objectives which are now incorporated directly into the state priority system for selecting candidate projects. The FY 2005 Alaska State single audit concluded that all findings in the previous (FY 2003 and 2004) audits had been addressed or were being resolved. There have been no new audit findings

or recommendations since that time. In the 2006 PART reassessment, the program received a rating of "adequate." These findings help illustrate the potential effectiveness of new programmatic improvements.

The 2006 PART reassessment included a requirement for an enhancement of the State of Alaska web-based reporting system. These enhancements were completed by the State in calendar year 2007. In addition, the State of Alaska has completed an independent review of the Alaska Native Tribal Health Consortium financial process and records and will conduct follow-up activities based on its recommendations. EPA also will focus in the coming year on closing out completed projects and program grants, in order to document accomplishments and resolve any remaining grant issues. A standard format for final technical reports will be developed, and individual final technical reports will be provided for each completed grant.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	Data Avail Late 2008	92	94	96	Percent Homes

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Number of homes that received improved service per $1,000,000 of Program funding.	29	60	45	50	Households

The results achieved for the ANV program efficiency measure have fluctuated significantly, with a significant drop in the FY 2007 actual efficiency results. This is due to the measure being based on the applications that are received by the Village Safe Water Program from the eligible communities in any given year, and the resulting ranking of these applications according to the Program priority system. Costs per home served will vary significantly, depending on whether the applicant community already has some established infrastructure or not.

Work under this program supports EPA's Protect Water Quality objective.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$9,110.0) The Congressionally directed increase provided in the FY 2008 omnibus appropriation is not carried forward in the FY 2009 request. The FY 2009 investment will leverage funding to serve 500-900 homes. This total is the net change, including the restoration of the 1.56% rescission to all program projects.

Statutory Authority:

SDWA Amendments of 1996.

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$85,865.8***	***$89,258.0***	***$93,518.0***	***$93,558.0***	***$40.0***
Hazardous Substance Superfund	$4,420.0	$0.0	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$90,285.8	$89,258.0	$93,518.0	$93,558.0	$40.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Economic changes over several decades have left thousands of communities with contaminated properties and abandoned sites known as brownfields. The Agency's Brownfields program coordinates a Federal, state, Tribal, and local government approach to assist in addressing environmental site assessment and cleanup through grants and cooperative agreements authorized by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 104(k) and related authorities.

The Brownfields program also assists in addressing environmental site assessment and cleanup through competitive grants to eligible entities and cooperative agreements authorized by CERCLA Section 104(k). The statute requires the Brownfields program to allocate 25 percent of the total available funds for CERCLA 104(k) grants to address sites contaminated by petroleum. With the funds requested, EPA will provide: 1) assessment and cleanup grants for recipients to inventory, characterize, assess, and conduct cleanup and redevelopment planning related to brownfields sites; 2) capitalization grants for Revolving Loan Funds (RLFs) to provide low interest loans for cleanups; 3) job training grants; 4) petroleum grants and 5) financial assistance to localities, states, tribes, and non-profit organizations for research, training, and technical assistance.

In a broader sense, EPA has been at the forefront of coordinating with other Federal agencies. In cooperation with its Federal partners, EPA developed the Brownfields Federal Partnership Action Agenda. The Action Agenda describes the commitment of more than 20 Federal agencies to help communities more effectively prevent, assess, safely clean up, and reuse brownfields.[3]

[3] Refer to http://www.epa.gov/docs/swerosps/bf/partners/federal_partnerships.htm.

FY 2009 Activities and Performance Plan:

In FY 2009, funding provided will result in the assessment of 1,000 brownfields properties and the cleanup of 60 brownfields properties. Brownfields grantees will leverage 5,000 cleanup and redevelopment jobs and $900 million in cleanup and redevelopment funding. Other activities include:

- Funding and technical support for an estimated 129 assessment grants for recipients to inventory, assess, and conduct cleanup and redevelopment planning at brownfields sites.

- The Agency will award approximately seven RLF cooperative agreements of up to $1,000,000 each per eligible entity. The RLF program which enables eligible entities to develop cleanup strategies, make loans to clean up properties, and encourage communities to leverage other funds into their RLF pools and cleanup grants.

- Funding also will support at least 96 grants to eligible entities to clean up properties. The Agency will award direct cleanup grants of up to $200 thousand per site to communities and non-profits.

- Assessment and cleanup of abandoned underground storage tanks (USTs) and other petroleum contamination found on brownfields properties in approximately 45 brownfields communities.

- Brownfields job training and development grants of up to $200 thousand each for a two year period. This funding will provide for at least 12 new job training grants for community residents to take advantage of new jobs leveraged by the assessment and cleanup of brownfields.

- Training, research and technical assistance grants and cooperative agreements as authorized under CERCLA Section 104(k)(6).

- Continued support for the showcase communities that demonstrate the benefits of interagency cooperative efforts in addressing environmental and economic issues related to Brownfields.

In 2003, the Brownfields program received an "adequate" PART rating, citing a clear purpose and achievement of performance targets. The program is implementing performance improvement plans related to performance measures, data collection, and program reviews and is on schedule to meet implementation deadlines.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Brownfield properties assessed.	Data Avail 2008	1,000	1,000	1000	Properties

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Acres of Brownfields properties made ready for reuse.	Data Avail 2008	No Target Established	225	225	Acres

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites.	Data Avail 2008	0.9	0.9	0.9	Billions of Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Number of properties cleaned up using Brownfields funding.	Data Avail 2008	60	60	60	Properties

The Brownfields Projects contributes overall to the Brownfields Program's goal and measures and also contributes to EPA efforts to assess and clean up brownfields, as described in EPA's FY 2006-2011 Strategic Plan.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$40.0) This change reflects a minor increase to this program.

Statutory Authority:

CERCLA as amended by SBLRBRA (P.L. 107-118); RCRA Section 8001; GMRA (1990); SWDA; FGCAA.

Diesel Emissions Reduction Grant Program
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$0.0***	***$35,000.0***	***$49,220.0***	***$49,220.0***	***$0.0***
CA Emission Reduction Project Grants	$0.0	$0.0	$9,844.0	$0.0	($9,844.0)
Total Budget Authority / Obligations	$0.0	$35,000.0	$59,064.0	$49,220.0	($9,844.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

These grant funds support the Diesel Emissions Reduction Program (DERA) authorized in sections 791-797 of the Energy Policy Act of 2005. DERA provides immediate emission reductions from existing diesel engines through engine retrofits, rebuilds and replacements, switching to cleaner fuels, idling reduction strategies and other clean diesel strategies. These strategies can reduce particulate matter (PM) emissions up to 95 percent, smog-forming emissions, such as hydrocarbons and nitrogen oxide, up to 90 percent and greenhouse gases up to 20 percent. The program covers existing diesel engines used in both highway and nonroad vehicles and equipment. The diesel engines covered are not subject to new, more stringent emissions standards implemented in 2007 and 2008. These older engines often remain in service for 20 or more years. The program targets fleets in five sectors: freight, construction, school buses, agriculture, and ports.

Under the Energy Policy Act of 2005, 70 percent of the total funds appropriated will be used to provide national grants and loans that achieve diesel emission reductions. Up to 10 percent of those funds may be used for diesel emission emerging technology demonstration grants. Finally, 30 percent of the total funds appropriated will be used to provide formula grants to states to establish and support state grant or loan diesel emission reduction programs.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will issue and manage various categories of Diesel Emission Reduction grants including: (1)(a) 70 percent of the total funding available will be used to establish competitive National Clean Diesel Campaign (NCDC) grants to directly fund and/or finance retrofits, rebuilds, and replacement as well as fuel switching and fuel efficiency measures associated with diesel trucks, ships, school buses and other diesel equipment. (b) Up to 10 percent of those funds will be used to establish grants to advance emerging diesel emission reduction technologies, with a focus on new technologies applicable to ocean-going vessels, harbor craft, and goods movement;. (c) The Agency will establish a pilot project involving competitive grants to help

qualifying entities (states, local governments, ports etc) create innovative Air Quality Finance Authorities/Programs (AQFAs) that provide low cost, flexible loans for the purchase of new and cleaner used equipment, as recommended by the Agency's Environmental Finance Advisory Board EFAB). (2) The remaining 30 percent of the total funding available will be used in formula grants to states to implement state diesel emission reduction programs defined under the DERA.

In FY 2009, EPA will begin an initiative focused on ports that will utilize many of the strategies and technologies implemented through all four aspects of the Diesel Emission Reduction Program, as noted above. Through this initiative, EPA will solicit proposals for projects that would reduce supply chain emissions associated with the movement of goods through ports. These proposals would then compete with other project proposals under the National Clean Diesel Campaign mentioned above. Explosive growth in international trade and goods movement is placing pressure on U.S. ports and our transportation supply chain infrastructure. Pollution from port related activities increasingly pose health and environmental risks to those living around ports, distribution centers and along major supply chain corridors where goods move through ports. Between 2004 and 2005, waterborne trade in the U.S. increased by 17% in volume and containerized cargo will triple by 2020. Coastal and inland port authorities, terminal operators, vessel owners, rail and trucking firms and their customers rely on diesel engines to move goods everyday. Total freight operations in 2005, contributed 2.2 million tons of NOx, 60,000 of PM and almost 400 million tons of CO_2 nationwide.

EPA also will continue to provide diesel emission reduction technology verification as well as quantification and evaluation of emissions reduction strategies and their cost effectiveness. Funds will continue to support the Agency's well-established Clean School Bus Program.

Performance Targets:

Work under this program supports multiple performance objectives. Currently, there are no performance measures specific to this program. EPA estimates that the $49.2 million for Federal and State Diesel Emission Reduction grants/loans would leverage at least $100 million in funding assistance and reduce PM by approximately 7,000 tons, achieving up to an estimated $2.0 billion in health benefits.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$9,844.0) This decrease reflects the discontinuation of a congressionally directed program to the San Joaquin and South Coast Air Quality Management Districts and reduces a congressionally directed increase in the FY 2008 Omnibus. All priority activities in this program can be funded within the base resources..

Statutory Authority:

CAA Amendments, Title I (NAAQS); CAA Amendments, Title III (Air Toxics); CAA, Sections 103, 105, and 106 (Grants), Energy Policy Act of 2005, Sections 741 and 791-797.

Infrastructure Assistance: Mexico Border
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$96,452.7***	***$10,000.0***	***$19,688.0***	***$10,000.0***	***($9,688.0)***
Total Budget Authority / Obligations	$96,452.7	$10,000.0	$19,688.0	$10,000.0	($9,688.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The United States and Mexico share more than 2,000 miles of common border. More than 14.6 million people live in the border area, mostly in fifteen "sister city pairs." The rapid increase in population and industrialization in the border cities has overwhelmed existing wastewater treatment and drinking water supply facilities. Untreated and industrial sewage often flows north into the U.S. from Tijuana, Mexicali, and Nogales, and into the Rio Grande. EPA works closely with the appropriate partners to evaluate environmental needs and to facilitate the construction of environmental infrastructure through the provision of grant funding for the planning, design, and construction of high priority water and wastewater treatment facilities along the border.

The U.S.-Mexico Border 2012 Program, a joint effort between the U.S. and Mexican governments, will continue to work with the 10 border states (four U.S. and six Mexican) and local communities to improve the region's public and environmental health. The U.S. and Mexican governments will work to improve water quality along the border through a range of pollution control sanitation projects, with the goal of restoring the quality of the majority of the currently impaired significant shared and transboundary surface waters by the year 2012. This effort will reduce health risks to residents who may currently lack access to safe drinking water. Similarly, by providing homes access to basic sanitation, EPA and its partners will reduce the discharge of untreated domestic wastewater into surface and ground water.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to support the construction of infrastructure that will connect and serve the homes of the border area residents with safe drinking water and wastewater treatment. Using previously funded projects as an indicator, we anticipate that the FY 2009 investment of $10 million will fund 4-6 water infrastructure projects, benefiting approximately 32,000 people once completed. This level of funding will allow the program to meet its annual targets. The Agency also will continue to support the planned assessment of shared and transboundary surface waters to facilitate the collection, management, and exchange of environmental data essential for effective water management. In addition, the Agency will support the protection of public health at border area coastal beaches and improvements in efficiency of service provider operations.

Since 1994, Congress has appropriated approximately $953 million to EPA for the U.S.-Mexico Border Water Infrastructure Program. Border Environment Infrastructure Fund (BEIF) funds currently at the NADBank are assigned to projects that are under development, in construction, or in project closeout. To ensure responsible fiscal management of these and future funds, in 2005 the Agency began implementing project management enhancements to strengthen the program and reduce the BEIF balance. These enhancements focus on improving fiscal management while improving project completion rates to ensure the timely delivery of safe drinking water and wastewater infrastructure to communities along the border. Project management enhancements include creating time limits for project development and construction phases, and instituting a deadline to start BEIF disbursements within two years of EPA's approval of the project financing package. Further, EPA finalized a fiscal policy in FY 2007 which provides clear direction for the liquidation of funds and completion of older projects. These reforms have already led to improvements in the program's unliquidated balances and project completions. As of December 2007, the program has completed 35 of 72 certified projects and reduced the unliquidated balance by $91 million, to $209 million.[4]

In FY 2008, EPA plans to conduct the third bi-annual Border-wide competition of projects using a risk-based prioritization system that enables the program to direct BEIF funding to projects that demonstrate high human health benefits, cost-effectiveness, institutional efficiency and sustainability. The U.S. Mexico Border Water Infrastructure Program underwent a PART evaluation for the first time in 2004 and received a rating of "adequate."

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Additional people served per million dollars (US and Mexico federal expenditures) (under development)	10,292	3,200	3,200	3,200	People/M

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003.	1,276	1,200	2,500	2,500	More Homes

[4] EPA is in the process of obligating an additional $40.2 million to the NADBank for water infrastructure projects selected through the FY 2007/2008 prioritized project selection process.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003.	73,475	70,750	15,000	15,000	More Homes

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- ($4,944.0) This reduces congressionally directed funding in the FY 2008 Omnibus, including a 1.56% rescission, for El Paso and Brownsville projects.

- ($4,922.0) The requested level of funding will allow the Agency to fund approved projects to continue efforts toward providing access to safe drinking water and sanitary systems for underserved communities in the region. EPA is closely monitoring fund disbursements and project completion rates to ensure sufficient funding for current and future projects.

Statutory Authority:

Treaty entitled "Agreement between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area, August 14, 1983"; CWA.

Program Area: Categorical Grants

Categorical Grant: Beaches Protection
Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$10,573.4***	***$9,900.0***	***$9,746.0***	***$9,900.0***	***$154.0***
Total Budget Authority / Obligations	$10,573.4	$9,900.0	$9,746.0	$9,900.0	$154.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA awards grants to eligible coastal and Great Lakes states, territories, and tribes to improve water quality monitoring at beaches and to notify the public of beach warnings and closings. The Beach grant program is a collaborative effort between EPA and states, territories, local governments, and tribes to help ensure that recreational waters are safe for swimming. Congress created the program with the passage of the Beaches Environmental Assessment and Coastal Health Act (BEACH Act) in October 2000 with the goal of improving water quality testing at beaches and to help beach managers better inform the public when there are water quality problems.

EPA awards grants to eligible states, territories, and tribes using an allocation formula developed in consultation with states and other organizations. The allocation takes into consideration: beach season length, beach miles, and beach use.

(See http://www.epa.gov/waterscience/ for more information.)

FY 2009 Activities and Performance Plan:

States and territories currently monitor 3,771 beaches. To continue making progress on monitoring beaches in FY 2009, EPA expects to:

- Make grant funds available to all 35 eligible states and territories to monitor beach water quality and to notify the public of beach warnings and closings;
- Continue to make available to the public, through EPA's Beach Advisory Closing On-line Notification (BEACON) system, information on the status of beach closings at all monitored beaches; and
- Continue to work with coastal and Great Lakes states, territories, and tribes to address monitoring issues.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of days of beach season that coastal and Great Lakes beaches monitored by State beach safety programs are open and safe for swimming.	95.2	92.6	92.6	93	Percent of Days/Season

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$154.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

CWA; BEACH Act of 2000.

Categorical Grant: Brownfields
Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$50,556.9***	***$49,495.0***	***$48,723.0***	***$49,495.0***	***$772.0***
Total Budget Authority / Obligations	$50,556.9	$49,495.0	$48,723.0	$49,495.0	$772.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. The Agency's Brownfields program coordinates a Federal, state, Tribal, and local government approach to assist in addressing environmental site assessment and cleanup.

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 128(a), grants are provided to states and tribes for their response programs. The state and Tribal programs address contaminated sites that do not require Federal action, but need cleanup before the sites are considered for reuse. States and tribes may use grant funding for a variety of purposes including developing a public record, capitalizing a Revolving Loan Fund for brownfields, purchasing environmental insurance, and conducting site-specific related activities such as assessments at brownfield sites.[5]

FY 2009 Activities and Performance Plan:

Building the capacity of states and tribes to oversee the cleanup and redevelopment of brownfields will mean more sustained success at the local level, and potentially even higher leveraging of Federal dollars to revitalize communities across the country. The Agency requests funds to establish or enhance response programs across all 50 states, U.S. territories, and approximately 30 tribes.

In the 2003 PART process, the Brownfields program received an "adequate" rating, citing a clear purpose and achievement of performance targets. The program is implementing performance improvement plans related to performance measures, data collection, and program reviews and is on schedule to meet implementation deadlines.

[5] Refer to http://www.epa.gov/docs/swerosps/bf/pubs/st_res_prog_report.htm.

Performance Targets:

Work under this program supports the EPA "Communities" objective. The Brownfields Categorical Grant program contributes to the achievement of the "properties assessed" measure.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$772.0) This change reflects the restoration of the 1.56% rescission to all program projects. The additional funding will be provided to authorized grantees as part of their grant allocations to support Brownfields programs.

Statutory Authority:

CERCLA as amended by SBLRBRA (P.L. 107-118); RCRA Section 8001; GMRA (1990); SWDA; FGCAA.

Categorical Grant: Environmental Information

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$15,830.8***	***$12,850.0***	***$9,844.0***	***$11,000.0***	***$1,156.0***
Total Budget Authority / Obligations	$15,830.8	$12,850.0	$9,844.0	$11,000.0	$1,156.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Exchange Network grants provide funding to states, territories, Federally-recognized Indian tribes, and Tribal consortia to support their participation in the Environmental Information Exchange Network. The Exchange Network is an Internet and standards-based, secure information network that facilitates electronic reporting, sharing, integration, analysis, and use of environmental data from many different sources. The Network has been designed and is being built using 21st Century information technology, eliminating archaic reporting mechanisms (paper, diskettes, etc.) that promoted errors and late submissions. The funding, which supplements state and tribal investments, helps EPA's partners acquire and develop the hardware and software needed to connect to the Exchange Network, and to develop or acquire the data they need for decision making using the Network.

FY 2009 Activities and Performance Plan:

In FY 2009, the Exchange Network Grants Program will emphasize activities in three areas:

1) Because all 50 state environmental agencies now have operational nodes (connections to the Network), the FY 2009 program will focus on developing sustainable Network infrastructure for tribes, territories, and links with other state and Federal agencies to continue to grow the Network.

2) The program will focus on the development and exchange of regulatory and non-regulatory data flows. The major emphasis of the grant program will be to expand the number of regulatory data flows and develop and exchange non-regulatory data flows such as surface water quality. Exchange Network partners also will need continued support to augment the data available to other partners through their nodes. These efforts will support partners' program and business needs by facilitating better environmental and health decisions. Finally, these grants will enable partners to re-engineer their business process to include health data and to integrate it with environmental information in ways not currently possible.

3) Another emphasis is supporting multi-partner projects to plan, mentor, and train Exchange Network partners, and to develop and exchange data. These projects help encourage broader participation by existing and new partners; they also support innovation and improve the quality of individual grant products which, in turn, makes it easier to promote their re-use among a larger cross-section of Network partners.

Performance Targets:

Work under this program supports multiple strategic objectives.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,000.0) This increase will allow more states and tribes to upgrade their data exchange connections to a new technology protocol, thereby improving standards, security and authentication.

- (+$156.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority

Annual appropriations for the Departments of Veterans Affairs, Housing and Urban Development, and Independent Agencies, as follows: FY 2002, Public Law 107-73; FY 2003, Public Law 108-7; FY 2004, Public Law 108-199; FY 2005, Public Law 108-447; and FY 2007, Public Law 109-54.

Categorical Grant: Hazardous Waste Financial Assistance

Program Area: Categorical Grants
Goal: Land Preservation and Restoration
Objective(s): Preserve Land; Restore Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$104,650.9***	***$103,346.0***	***$101,734.0***	***$103,346.0***	***$1,612.0***
Total Budget Authority / Obligations	$104,650.9	$103,346.0	$101,734.0	$103,346.0	$1,612.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Resource Conservation and Recovery Act (RCRA) directs EPA to assist state programs through the Hazardous Waste Financial Assistance Grants program. The states propose legislation and upgrade regulations to achieve equivalence with the Federal Hazardous Waste Management program and then apply to EPA for authorization to administer the program. The state grants provide for the implementation of an authorized hazardous waste management program for the purpose of controlling the generation, transportation, treatment, storage, and disposal of hazardous wastes, including controlling and cleaning up past and continuing releases from hazardous waste management facilities through corrective action. This funding also provides for the direct implementation of the RCRA program for the States of Iowa and Alaska, which have not been authorized to operate in lieu of the Federal program. Funding distributed through these grants also supports tribes, where appropriate, in conducting hazardous waste work on Tribal lands.

FY 2009 Activities and Performance Plan:

In FY 2009, the following activities will be accomplished by states and by EPA for Iowa and Alaska, using RCRA Hazardous Waste Financial Assistance funds:

- Increase the number of RCRA hazardous waste management facilities with permits, permit renewals, or other approved controls to meet the FY 2009 Strategic Plan goal. This includes the following activities:
    - Issue operating and post-closure permits or use appropriate enforcement mechanisms to address environmental risk at inactive land-based facilities.
    - Approve closure plans for interim status treatment and storage facilities that are not seeking permits to operate and work with the facilities to clean-close those units.
    - Issue permit renewals for hazardous waste management facilities to keep permit controls up to date.

- Issue permit modifications, as needed.

- Operate comprehensive compliance monitoring and enforcement actions related to the RCRA hazardous waste program.

- Work with facilities to complete site assessments, control human exposures and the migration of contaminated groundwater, and make determinations regarding construction of final remedies as part of the efforts toward meeting the FY 2009 goals for the RCRA Corrective Action program.

This program was included in the 2004 PART review of the RCRA Base, Permits and Grants program, which received an overall rating of "adequate." During the PART, EPA developed an efficiency measure that will show, over time, the RCRA facilities under control per million dollars of program cost. The FY 2005 baseline was set in July 2006, and the program began reporting this efficiency measure target information in FY 2007.

Performance Targets:

Work under this program supports the objectives of preserving and restoring land. Currently, there are no performance measures specific to this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,612.0) This change reflects restoration of the 1.56% rescission to all program projects. The additional funding will be made available to all authorized grantees as part of their grant allocations in support of hazardous waste management oversight.

Statutory Authority:

SDWA, Sections 3011 (a) and (c) as amended; RCRA of 1976, as amended; Public Law 94-580, 42 U.S.C. 6901 et seq. Department of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations Act; Public Law 105-276; 112 Stat. 2461, 2499 (1988).

Categorical Grant: Homeland Security
Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$3,730.2***	***$4,950.0***	***$4,873.0***	***$4,950.0***	***$77.0***
Total Budget Authority / Obligations	$3,730.2	$4,950.0	$4,873.0	$4,950.0	$77.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA provides grants to states for coordination activities for critical water infrastructure security efforts. These activities include coordinating and providing technical assistance, training, and education within the state or territory on homeland security issues (particularly with homeland security offices and emergency response officials) relating to: ensuring the quality of drinking water utility vulnerability assessments and associated security enhancements; communicating vision, mission, and goals of the Water Sector-Specific Plan and the key features of an active and effective security program; helping to ensure best security practices for small systems; promoting outreach and education at small systems; promoting mutual aid compacts development; supporting the development of system redundancy, a national laboratory system, and disaster mitigation plans; and developing and overseeing emergency response and recovery plans. Emergency response and recovery plan implementation activities include table-top workshops, exercises, drills, response protocols, or other activities focusing on implementing security enhancements and improving the readiness of individuals and groups involved in first response at a drinking water system.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will award homeland security grants to states and territories to support their efforts to work with drinking water and wastewater systems to:

- Develop and enhance drinking water and wastewater utilities' preparedness capabilities;
- Improve emergency response coordination and communications; and
- Develop specific materials focused on improving security.

EPA homeland security grants will be awarded to 56 states and territories. These grants will improve operations of drinking water utilities through training and improved emergency response coordination (e.g., mutual aid agreements), communications, and preparedness. In addition, these resources will facilitate the development of materials (e.g., documents and training materials) focused on improving security and emergency response. See http://cfpub.epa.gov/safewater/watersecurity/financeassist.cfm for more information.

Performance Targets:

Work under this program supports EPA's Protect Human Health objective. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$77.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

SDWA; CWA; Public Health Security and Bioterrorism Emergency and Response Act of 2002.

Categorical Grant: Lead
Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$22,935.5***	***$13,564.0***	***$13,352.0***	***$13,564.0***	***$212.0***
Total Budget Authority / Obligations	$22,935.5	$13,564.0	$13,352.0	$13,564.0	$212.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA's Lead Risk Reduction program alleviates the threat to human health, particularly to young children, posed by exposure to lead-based paint and other sources of lead in the environment. The program is an important contributor to the Federal government's goal to virtually eliminate childhood lead poisoning by 2010, and that goal is its key performance measure. To accomplish the goal, the Agency will:

- Establish hazard control methods and standards to ensure that homeowners and others have access to safe, reliable and effective methods to reduce lead exposure;
- Maintain a national infrastructure of lead remediation professionals trained and certified to implement those standards; and
- Provide information to housing occupants so they can make informed decisions about lead hazards in their homes.

The Lead Categorical Grant program contributes to the Lead program's goals by maintaining a national infrastructure of trained and certified lead remediation professionals and supporting targeted outreach to populations deemed most at risk of exposure to lead from lead-based paint, dust, and soil.

See http://www.epa.gov/opptintr/lead/index.html for more information.

FY 2009 Activities and Performance Plan:

In FY 2009, the program will continue providing assistance to states, territories, the District of Columbia, and tribes to develop and implement authorized programs for lead-based paint remediation. These programs provide specialized individual training, accreditation of training programs, and the certification of contractors engaged in lead-based paint remediation.

EPA will continue to implement the lead-based paint activities through the Training and Certification program in areas without authorization through direct implementation by the Agency. Activities conducted as part of this program include the certification of individuals and firms engaged in lead-based paint abatement and inspection activities and the accreditation of

qualified training providers. Since their inception in 1998, the state, Tribal and Federal programs have certified more than 24,000 individuals.

In FY 2009, EPA will focus on implementation of a final regulation to address lead-safe work practices for renovation, repair, and painting. Activities will likely include training and certification requirements as well as updating accreditation requirements for training courses.

To meet the Federal goal of eliminating childhood lead poisoning as a public health concern by 2010, EPA recognizes that additional attention and assistance must be given to our most vulnerable populations – those with rates of lead poisoning in excess of the national average, and those living in areas where conditions indicate potentially high rates of lead poisoning but where screening has not yet occurred with sufficient frequency. To address this issue, in FY 2009 EPA will continue to award targeted grants to reduce childhood lead poisoning. These grants are available to a wide range of applicants, including state and local governments, Federally-recognized Indian tribes and Tribal consortia, territories, institutions of higher learning, and nonprofit organizations. In addition, EPA will continue a grant program initiated in FY 2007 which focuses on low-income communities through grants to national organizations engaged in working with these communities. This grant program is designed to help national organizations and community organizations reach under-served populations that may have a disproportionate number of children with elevated blood lead levels.

The Lead program underwent its first PART assessment in 2005, receiving a "moderately effective" rating and the third highest points rating awarded to EPA programs through that date. Through the PART, EPA introduced a new long-term and annual results measure (percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old), and a new efficiency measure (annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process). Through the PART Improvement Plan process, EPA improved the consistency of grantee and regional accountability and improved the linkage between program funding and program goals with an emphasis on grant and contract funding. In FY 2009, the Agency will implement recently completed PART follow-up actions to improve measures used in the State Grant Reporting Template and to further improve results reporting from program partners. For more information, visit http://www.epa.gov/opptintr/lead/index.html.

Performance Targets:

Activities for this appropriation support PART measures listed for Toxic Substances: Lead Risk Reduction Program (EPM).

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$212.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

TSCA.

Categorical Grant: Nonpoint Source (Sec. 319)

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$209,889.6***	***$194,040.0***	***$200,857.0***	***$184,540.0***	***($16,317.0)***
Total Budget Authority / Obligations	$209,889.6	$194,040.0	$200,857.0	$184,540.0	($16,317.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Nonpoint source pollution is the greatest remaining source of surface and ground water quality impairments and threats in the United States. Grants under Section 319 of the Clean Water Act (CWA) are provided to states, territories, and tribes to help them implement their EPA-approved nonpoint source (NPS) management programs by remediating NPS pollution that has occurred in the past and by preventing or minimizing new NPS pollution.

Section 319 broadly authorizes states to use a range of tools to implement their programs, including: both regulatory and non-regulatory programs, technical assistance, financial assistance, education, training, technology transfers, and demonstration projects. States currently focus $100 million of their Section 319 funds on the development and implementation of watershed-based plans that are designed to restore impaired waters (listed under CWA Section 303(d)) to meet water quality standards.

(See http://www.epa.gov/fedrgstr/EPA-WATER/2003/October/Day-23/w26755.htm for more information.)

FY 2009 Activities and Performance Plan:

The pervasiveness of nonpoint source pollution requires cooperation and involvement from EPA, other Federal agencies, the states, and concerned citizens to solve NPS pollution problems. In 2009, EPA will work closely with and support the many efforts of states, interstate agencies, tribes, local governments and communities, watershed groups, and others to develop and implement their local watershed-based plans and restore surface and ground waters nationwide.

States will continue to develop and implement watershed-based plans to restore impaired waterbodies to meet water quality standards. These watershed-based plans, a key emphasis of the national nonpoint source control program, will move EPA toward the strategic goal of more waters attaining designated uses and enable states to determine the most cost-effective means to meet their water quality goals through the analysis of sources of pollutants of concern; the sources' relative significance; available cost-effective techniques to address those sources;

availability of needed resources, authorities and community involvement to affect change; and monitoring that will enable states and local communities to track progress and make changes over time that they deem necessary to meet their water quality goals. Full requirements for these plans are described in detail in the NPS program grant guidelines. (For more information see http://www.epa.gov/owow/nps/cwact.html.)

EPA will continue to forge and strengthen strategic partnerships with the agricultural and forestry communities, developers, and other groups that have an interest in achieving water quality goals in a cost-effective manner. Agricultural sources of pollution in the form of excess fertilizer or pesticides have had a particularly profound effect on water quality. Therefore, EPA will work closely with the U.S. Department of Agriculture (USDA) to ensure that Federal resources -- including both Section 319 grants and Farm Bill funds -- are managed in a coordinated manner to protect water quality from agricultural pollution sources. More broadly, EPA will work with states to ensure that they develop and implement their watershed-based plans in close cooperation with state conservationists, soil and water conservation districts, and all other interested parties within the watersheds.

EPA will continue to track the steady increases in the cumulative dollar value and number of projects financed with Clean Water State Revolving Funds (CWSRF) loans to prevent polluted runoff. Properly managed onsite/decentralized systems are an important part of the nation's wastewater infrastructure and EPA will encourage state, Tribal, and local governments to adopt effective management systems and use CWSRF loans to finance systems where appropriate.

In 2004, the Section 319 Nonpoint Source Program underwent a PART review and received an overall rating of "adequate." The Nonpoint Source Program created three annual output measures and one long-term outcome measure. The annual output measures are to annually reduce the amount of runoff of phosphorus, nitrogen, and sediment through Section 319 funded projects by 4.5 million pounds, 8.5 million pounds, and 700 thousand tons, respectively. All 3 of these measures have been exceeded in each year, except for 2005, when they were partially met. EPA believes that exceptions reflect the natural variability of the type and scope of projects implemented each year. For example, some states are currently focusing on remediating waters that have been 303(d)-listed for other pollutants that are not nationally tracked for load reduction calculations, like pathogens, temperature, or acidity.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Additional pounds (in millions) of reduction to total nitrogen loadings.	Data Avail 2008	8.5	8.5	8.5	Lbs in Millions

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Reduction in phosphorus loadings (millions of pounds).	Data Avail 2008	4.5	4.5	4.5	Lbs in Millions

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Additional tons of reduction to total sediment loadings.	Data Avail 2008	700,000	700,000	700,000	Tons of Reductions

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$16,317.0) This total is the net of a reduction of congressionally directed funding in the FY 2009 Omnibus and a programmatic reduction of $9.5 million for the nonpoint source program. EPA and the states have typically exceeded their targets for sediment and nutrient loadings and EPA will work with states to ensure continued focus on high priority activities to restore impaired waters. This total also includes the restoration of the FY 2008 Omnibus 1.56% rescission.

Statutory Authority:

CWA.

Categorical Grant: Pesticides Enforcement

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$19,063.6***	***$18,711.0***	***$18,419.0***	***$18,711.0***	***$292.0***
Total Budget Authority / Obligations	$19,063.6	$18,711.0	$18,419.0	$18,711.0	$292.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Pesticide Enforcement grants ensure pesticide product and user compliance with provisions of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Areas of focus include problems relating to pesticide worker safety protection, ineffective antimicrobial products, food safety, adverse effects, and e-commerce. The program provides compliance assistance to the regulated community through such resources as EPA's National Agriculture Compliance Assistance Center, seminars, guidance documents, brochures, and outreach to foster knowledge of and compliance with environmental laws pertaining to pesticides.[6]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will award state and Tribal enforcement grants to assist in the implementation of the compliance and enforcement provisions of FIFRA. These grants support state and Tribal compliance and enforcement activities designed to protect the environment from harmful chemicals and pesticides. EPA's support to state and Tribal pesticide programs will emphasize pesticide worker protection standards, high risk pesticide activities including antimicrobials, pesticide misuse in urban areas, and the misapplication of structural pesticides. States also will continue to conduct compliance monitoring inspections on core pesticide requirements.

EPA refined PART measure data collection procedures with a Federal and state workgroup in 2005 for the EPA Pesticide Enforcement Grant Program that received an "ineffective" rating in 2004. EPA negotiated final commitments for the collection of new data for pesticide enforcement grant PART measures with states and tribes in 2006 based on PART-approved measures. EPA began to receive this data in January 2007 and has started to analyze the data.

[6] For additional information, refer to: www.epa.gov/compliance/state/grants/fifra.html.

Performance Targets:

The "ineffective" PART rating for this program in 2004 reflected the absence of data needed to implement program outcome and efficiency measures called for by the PART. To address this problem, new measures were developed by the program, and approved by OMB during the 2004 PART review. In FY 2005, EPA negotiated performance data collection requirements with grantees for the new outcome and efficiency measures. EPA began to receive grantees' data in January 2007 and has started to analyze the information to develop program metrics for demonstrating results.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$292.0) This change reflects restoration the 1.56% rescission to all program projects.

Statutory Authority:

FIFRA.

Categorical Grant: Pesticides Program Implementation

Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$13,319.3***	***$12,970.0***	***$12,768.0***	***$12,970.0***	***$202.0***
Total Budget Authority / Obligations	$13,319.3	$12,970.0	$12,768.0	$12,970.0	$202.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Agency provides grants to assist states, tribes and partners with worker safety activities, protection of endangered species and water sources, and promotion of environmental stewardship. In addition, the Agency provides grants to promote stronger Tribal pesticide programs. EPA's mission as related to pesticides is to protect human health and the environment from pesticide risk and to realize the value of pesticide availability by considering the economic, social and environmental costs and benefits of the use of pesticides. The Agency achieves this goal through implementation of its statutes and regulatory actions.

Pesticides Program Implementation Grants ensure that pesticide regulatory decisions made at the national level are translated into results on the local level. States and tribes provide essential support in implementing pesticides programs, give input regarding effectiveness and soundness of regulatory decisions, and develop data to measure program performance. Under pesticide statutes, responsibility for ensuring proper pesticide use is in large part delegated to states and tribes. Grant resources allow states and tribes to be effective regulatory partners. EPA's philosophy is to provide resources for those closest to the source of potential risks from pesticides since they are in a position to better evaluate risks and implement risk reduction measures.

FY 2009 Activities and Performance Plan:

Certification and Training/Worker Protection

Through the Certification and Training/Worker Protection programs, EPA protects workers, pesticide applicators/handlers, employers, and the public from the potential risks posed by pesticides in their homes and work environments. EPA will continue to provide assistance and grants to implement the Certification and Training/Worker Protection programs. Grant funding will provide for maintenance and improvements in training networks, safety training to workers and pesticide handlers, development of *Train the Trainer* courses, workshops, and development and distribution of outreach materials. The Agency's partnership with states and tribes in educating workers, farmers, and employers on the safe use of pesticides and worker safety will

continue to be a major keystone in the success of the Agency's human health protection. (See http://www.epa.gov/oppfod01/safety/applicators/applicators.htm.)

Endangered Species Protection Program (ESPP)

The ESPP protects animals and plants whose populations are threatened by risks associated with pesticide use. EPA complies with Endangered Species Act requirements to ensure that its regulatory decisions are not likely to jeopardize species listed as endangered and threatened, or harm habitat critical to those species' survival. EPA will provide grants to states and tribes for projects supporting endangered species protection. Program implementation includes outreach, communication, education related to use limitations, review and distribution of Endangered Species Protection Bulletins, and mapping and development of endangered species protection plans. This initiative supports the Agency's mission to protect the environment from pesticide risk.

Protection of Water Sources from Pesticide Exposure

Protecting the nation's water sources from possible pesticide contamination is another component of EPA's environmental protection efforts. The Agency provides funding through cooperative agreements to states and Tribal pesticide lead agencies to investigate and respond to water resource contamination by pesticides. States and tribes are also expected to evaluate local pesticides that have potential to contaminate water resources, and take steps to prevent or reduce contamination where pesticide concentrations approach or exceed levels of concern.

Pesticide Environmental Stewardship Program (PESP):

The PESP is a voluntary program that forms partnerships between EPA and pesticide user groups to reduce pesticide use and risk through pollution prevention strategies and promoting the use of Integrated Pest Management (IPM) techniques. PESP currently has 184 partner/supporter organizations ranging from federal partners (e.g., Department of Defense) to state partners (e.g., Maryland Department of Agriculture), to trade associations and individual companies.

EPA will continue to support risk reduction by providing assistance to promote the use of safer alternatives to traditional chemical methods of pest control. EPA supports the development and evaluation of new pest management technologies that contribute to reducing both health and environmental risks from pesticide use. For additional information, see http://www.epa.gov/oppbppd1/PESP/index.htm.

Tribal

The Agency will support Tribal activities in implementing pesticide programs through grants. Tribal program outreach activities support Tribal capacity to protect human health by reducing risk from pesticides in Indian country. This task is challenging given that aspects of Native Americans' lifestyles, such as subsistence fishing or consumption of plants that were specifically grown as food and possibly exposed to pesticides not intended for food use may increase

exposure to some chemicals or create unique chemical exposure scenarios. For additional information, please visit http://www.epa.gov/oppfead1/tribes/.

Performance Targets:

Work under this program supports the Chemical and Pesticide Risks objective. Currently there are no performance measures specific to this program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$202.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA; ESA.

Categorical Grant: Pollution Control (Sec. 106)

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$211,210.8***	***$221,664.0***	***$218,206.0***	***$221,664.0***	***$3,458.0***
Total Budget Authority / Obligations	$211,210.8	$221,664.0	$218,206.0	$221,664.0	$3,458.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Section 106 of the Clean Water Act (CWA) authorizes EPA to provide Federal assistance to states (including territories and the District of Columbia), tribes qualified under CWA Section 518(e), and interstate agencies to establish and maintain adequate measures for the prevention and control of surface and ground water pollution from point and nonpoint sources. Prevention and control measures supported through these grants include permitting, pollution control studies, water quality planning, monitoring assessment and standards development, Total Maximum Daily Load (TMDL) development, surveillance and enforcement, pretreatment programs, advice and assistance to local agencies, training, public information, and oil and hazardous materials response. The grants also may be used to fund services from non-profit organizations to assist Regional Offices overseeing direct implementation programs through the Senior Environmental Employment (SEE) program. The grants may also be used to provide "in-kind" support through an EPA contract if a state or tribe requests that part of their allotment be used to purchase equipment or services.

FY 2009 Activities and Performance Plan:

This program supports states, interstate agencies, and tribes in their efforts to implement key CWA programs that will restore and improve the quality of waters, allowing the Agency to achieve the long-term national goal of assessing all waters, protecting high quality waters, and addressing over 2,250 impaired waters by 2012. Through the Section 106 grant program, the Agency continues to support prevention and control measures of state water quality management programs: standards development; monitoring; permitting and enforcement; advice and assistance to local agencies; and the provision of training and public information. The Water Pollution Control Program is helping to foster a watershed protection approach at the state level by encouraging states to address water quality problems holistically, thereby targeting resources for efficient program management.

EPA will collaborate with state and Tribal partners to further enhance water monitoring programs consistent with comprehensive monitoring strategies and to collaborate on statistically valid surveys of the condition of the nation's waters. In FY 2009, states and tribes, working with

EPA, will issue a report on the statistically-valid baseline conditions of lakes nationwide. States and tribes also will be analyzing samples for a statistically-valid survey of baseline conditions in rivers and a second survey of wadeable streams to determine trends in stream conditions. A report on trends in streams and the baseline condition of rivers will be issued in 2011. States and tribes, working with EPA, will design and collect field data for a fourth survey of coastal water conditions. In addition, planning for a survey of wetlands is underway. The intent is that surveys of the nation's waters will be repeated periodically to track trends in water quality, giving decision makers and the public the information they need to determine the effectiveness of the Agency's investments in water quality protection.

In FY 2009, $18.5 million will be designated for states and tribes that participate in collecting statistically valid water monitoring data and implement enhancements in their water monitoring programs. EPA will continue to work closely with the states to adopt statistically-valid surveys into their state-level monitoring program. Unless at least five additional states meet the criteria for improvement, a portion of the capacity-building funds in the monitoring initiative will be reallocated in FY 2009 to those states that are implementing state-level statistically-valid surveys.

States, interstate agencies, and tribes continue to foster a "watershed approach" as the guiding principle of their clean water programs. Development of TMDLs for an impaired waterbody is a critical tool for meeting water restoration goals. In watersheds where quality standards are not attained, states will be developing TMDLs, watershed plans or other appropriate mechanisms that, when implemented, will result in attainment of water quality standards. States and EPA have made significant progress in the development and approval of TMDLs (cumulatively almost 22,000 state TMDLs were completed through FY 2007) and we expect to develop more than 3,000 additional TMDLs in FY 2009. Resources in this program will continue to support TMDL implementation (including through issuance of permits that include limitations consistent with TMDLs); states will be encouraged to ensure that TMDLs are implemented.

The states will continue to implement the "*Permitting for Environmental Results Strategy,*" which focuses limited resources on the most critical environmental problems through program assessments, permit quality reviews, and other actions to ensure the integrity of the program; concentrating on environmental results by tracking priority permits and encouraging trading and watershed-based permitting; and fostering efficiency in permitting program operations. In the second quarter of 2008, EPA expects to finalize a rule that incorporates financial incentives for states that implement adequate National Pollutant Discharge Elimination System (NPDES) fee systems. In FY 2009, EPA will award funds to states that choose to participate in this voluntary program.

New rules will be finalized in FY 2008 for discharges from Concentrated Animal Feeding Operations (CAFOs), and states will work to assure that permits cover all discharging CAFOs by February 27, 2009. In addition, states will continue to ensure that all Phase II municipal separate storm sewer systems (MS4s) and construction sites covered by Phase II of the storm water program are covered by permits.

States and authorized tribes will continue to review and update their water quality standards as required by the CWA. The Agency's goal is that 83 percent of state and territorial submissions will be approvable in FY 2009. EPA also encourages states to continually review and update water quality criteria in their standards to reflect the latest scientific information from EPA and other sources. EPA's goal for 2009 is that 68 percent of states will have updated their standards to reflect the latest scientific information in the past three years.

A key performance measure for the Surface Water Protection program is the percentage of water body segments, identified by states in 2002 as not attaining standards, where water quality standards are now attained. EPA state partners play a key role in developing and implementing plans and documenting progress made toward reaching the FY 2012 target for this measure. EPA is working with states to develop detailed plans documenting how stakeholders will work together to achieve these goals.

(See http://www.epa.gov/owm/cwfinance/pollutioncontrol.htm for more information.)

The Water Pollution Control Grants program underwent a PART evaluation in 2005 and received a rating of "adequate." The Agency has been successful in meeting or exceeding performance targets agreed to during this process. The PART review identified areas requiring improvement plans (follow-up actions). In response, the Agency:

- Continues to target, through an allocation formula, a portion of the appropriated funds to support statistically-valid surveys of water condition; and
- Drafted a rule which will provide incentives, through a set-aside of appropriated funds, for states to implement or improve their permit fee programs, increasing the resources available for water quality programs. EPA announced the proposed rule and conducted a public comment process, which included a public meeting and two comment periods, during FY 2007. The Agency expects to finalize the rule in the second quarter of 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Percent of States & Territories that, within the preceding 3-yr. period, submitted new or revised water quality criteria acceptable to EPA that reflect new scientific info from EPA or sources not considered in previous standards.	66.1	67	68	68	Percent States/Terr.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Percentage of high priority state NPDES permits that are scheduled to be reissued.	112	95	95	95	Percent Permits

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Cost per water segment restored.	512,735	615,694	684,200	725,902	Cost Per Segment

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Number of TMDLs that are established by States and approved by EPA on schedule consistent with national policy (cumulative).	21,685	20,232	28,527	31,587	TMDLs

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Ouput	Percentage of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	Data Avail 2008	22.5	22.5	22.5	Percentage Dischargers

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative).	1,409	1,166	1,550	1,660	Number of Segments

EPA works with states to ensure they develop TMDLs for impaired waters within a timeframe consistent with national policy (*i.e.*, 8 to 13 years). In August of 2007, EPA adopted a clarification to the TMDL counting methodology to more directly reflect the pollutants addressed in TMDLs. As a result of this counting methodology change, the cumulative fiscal year Water Pollution Control Actuals have been revised, resulting in a cumulative net reduction of 1,057

TMDLs. Actuals and targets for fiscal year 2007 and earlier were also adjusted consistent with this revised methodology.

Note: Because a TMDL is a plan for attaining water quality standards, the terms "approved" and "established" refer to the completion of the TMDL itself and not necessarily its implementation.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$3,458.0) This change reflects restoration of the 1.56% rescission to all program projects and will be used to restore baseline funding for the probabilistic monitoring initiative, restore baseline funding for Tribal and interstate programs, and provide additional funds to states that implement the NPDES permit fee incentive rule.

Statutory Authority:

CWA.

Categorical Grant: Pollution Prevention

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$6,121.9***	***$5,940.0***	***$4,863.0***	***$4,940.0***	***$77.0***
Total Budget Authority / Obligations	$6,121.9	$5,940.0	$4,863.0	$4,940.0	$77.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Pollution Prevention Program is one of EPA's primary tools for encouraging environmental stewardship by the Federal government, industry, communities, and individuals, both domestically and globally. The program employs a combination of collaborative efforts, innovative programs, and technical assistance and education to support stakeholder efforts to minimize and prevent adverse environmental impacts by preventing the generation of pollution at the source. For more information, please visit http://www.epa.gov/p2/.

FY 2009 Activities and Performance Plan:

The goal of the P2 Grants Program is to assist businesses in identifying better environmental strategies and solutions for reducing or eliminating waste at the source. Funds awarded through this grant program to states and state entities (i.e., colleges and universities) and Federally-recognized tribes and Intertribal Consortia help to support work with businesses and industry to reduce the release of potentially harmful pollutants across all environmental media including air, water, and land. The program supports projects that reflect comprehensive and coordinated pollution prevention planning and implementation efforts within the state or tribe to ensure that businesses and industry have ample opportunities to implement pollution prevention as a cost-effective way of meeting or exceeding Federal and state regulatory requirements.

The grants are awarded by EPA's Regional offices. This enables the Agency to focus these resources on regional priorities. In addition to supporting traditional P2 technical assistance programs, many states have utilized P2 Grants to assist businesses by initiating regulatory integration projects to develop prevention strategies in state core media programs, train regulatory staff on P2 concepts, and examine opportunities for incorporating pollution prevention into permits, inspections, and enforcement. States also have established programs in non-industrial sectors such as agriculture, energy, health, and transportation.

The Agency also will continue to support the Pollution Prevention Information Network grant program which funds the services of a network of regional centers, collectively called the Pollution Prevention Resource Exchange (P2Rx) that provides information to state technical assistance centers. For more information please visit http://www.epa.gov/p2/pubs/grants/ppis/ppis.htm.

EPA's Pollution Prevention Program, including this Categorical Grant Program, underwent PART review in 2006 and received a "moderately effective" rating and the third highest point rating awarded to EPA programs through that date, confirming that the program produces important environmental results in a well-managed and efficient manner. The PART improvement plan recommended that EPA obtain and evaluate Science Advisory Board Report recommendations for improving performance measures to better demonstrate Pollution Prevention results, work to reduce barriers confronted by industry and others in attempting to implement source reduction, fully implement Grant Track and the P2 State Reporting System, and develop additional efficiency measures, all of which will be brought to completion prior to and during FY 2009.

Performance Targets:

Activities for this appropriation support PART measures listed for the Pollution Prevention Program funded under EPA's Environmental Program Management account.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$77.0) This change reflects restoration of the 1.56% restoration to all program projects.

Statutory Authority:

PPA; TSCA.

Categorical Grant: Public Water System Supervision (PWSS)

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$97,461.9***	***$99,100.0***	***$97,554.0***	***$99,100.0***	***$1,546.0***
Total Budget Authority / Obligations	$97,461.9	$99,100.0	$97,554.0	$99,100.0	$1,546.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Public Water System Supervision (PWSS) grant program provides grants to states and tribes with primary enforcement authority (primacy) to implement and enforce National Primary Drinking Water Regulations (NPDWRs). These grants help to ensure the safety of the nation's drinking water resources and thereby protect public health.

NPDWRs set forth monitoring, reporting, compliance tracking, and enforcement elements to ensure that the nation's drinking water supplies do not contain substances at levels that may pose adverse health effects. These grants are a key implementation tool under the Safe Drinking Water Act and support the states' role in a Federal/state partnership of providing safe drinking water supplies to the public. Grant funds are used by states to:

- Provide technical assistance to owners and operators of water systems;
- Maintain compliance data systems;
- Compile and analyze compliance information;
- Respond to violations;
- Certify laboratories;
- Conduct laboratory analyses;
- Conduct sanitary surveys;
- Draft new regulations and legislative provisions where necessary; and
- Build state capacity.

Not all states and tribes have primary enforcement authority. Funds allocated to the State of Wyoming, the District of Columbia, and Indian tribes without primacy are used to support direct implementation activities by EPA in those locations, for developmental grants, and for "treatment in a similar manner as a state" (TAS) grants to Indian tribes to develop the PWSS program on Indian lands with the goal of Tribal authorities achieving primacy.

(See http://www.epa.gov/safewater/pws/pwss.html for more information.)

FY 2009 Activities and Performance Plan:

EPA will continue to support state and Tribal efforts to meet new and existing drinking water standards through the PWSS grant program. In FY 2009, the Agency will continue to emphasize that states should use their PWSS funds to ensure that:

1) Drinking water systems of all sizes achieve or remain in compliance;
2) Drinking water systems of all sizes are meeting new health-based standards and are prepared for new regulatory requirements (*e.g.*, Long Term 2 Enhanced Surface Water Treatment Rule or "LT2", Stage 2 Disinfectants and Disinfection Byproducts Rule or "Stage 2", and Ground Water Rule or "GWR"); and
3) Data quality issues are identified and addressed.

The states are the primary implementers of the national drinking water program and ensure that the systems within their jurisdiction are in compliance with drinking water rules. Thus, while there is not a separate measure for the PWSS grant program to the states, the performance measures directly contribute to the PWSS grant program on the number of community water systems that supply drinking water meeting all health-based standards. The Public Water System Supervision Grant program was included in the 2004 PART review and received an overall rating of "adequate."

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89	89	89.5	90	Percent Systems

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	91.5	94	90	90	Percent Population

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,546.0) This change reflects restoration of the 1.56% rescission to all program projects across all programs. These funds will support the Administrator's commitment of ensuring clean and safe water.

Statutory Authority:

SDWA.

Categorical Grant: Radon
Program Area: Categorical Grants
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Indoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$7,915.0***	***$8,074.0***	***$7,948.0***	***$8,074.0***	***$126.0***
Total Budget Authority / Obligations	$7,915.0	$8,074.0	$7,948.0	$8,074.0	$126.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA's non-regulatory indoor radon program promotes voluntary public action to reduce health risk from indoor radon (second only to smoking as a cause of lung cancer). EPA assists states and tribes through the State Indoor Radon Grant Program (SIRG), which provides categorical grants to develop, implement, and enhance programs to assess and mitigate radon risks. States and tribes are the primary implementers of radon testing and mitigation programs. This voluntary program includes national, Regional, state, and Tribal programs and activities that promote radon risk reduction activities.

FY 2009 Activities and Performance Plan:

In FY 2009, states will:

- Continue to focus their efforts on increasing risk reduction actions among consumers, homeowners, real estate professionals, homebuilders, and local governments.

- Work with EPA to ensure that SIRG funds achieve the following results: homes mitigated, homes built with radon resistant new construction, and schools mitigated or built with radon resistant new construction.

- Work with EPA to align performance measures.

The Indoor Air program received a rating of "moderately effective" during a 2005 PART assessment. The Indoor Air program is not regulatory. Instead, EPA works toward its goal by conducting research and promoting appropriate risk reduction actions through voluntary education and outreach programs. The Agency will continue to focus on making efficiency improvements and plans to improve transparency by making state radon grantee performance data available to the public via a website or other easily accessible means.

The State Indoor Radon Grants fund outreach and education programs in most states to reduce the public-health impact of radon, with an average award per state of $160,000 annually. EPA targets this funding to support states with the greatest populations at highest risk and supplements grant dollars with technical support to transfer "best practices" from high-achieving states to promote effective program implementation across the Nation.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Total Cost (public and private) per future premature cancer death prevented through lowered radon exposure.		No Target Established	No Target Established	415,000	Dollars

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	late 2008	190,000	225,000	265,000	Homes

Program goals are the result of the total funding the program area receives through EPM, S&T, and SIRG funding.

In FY 2009, EPA's goal is to add 265,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over 2 million. EPA estimates that this cumulative number will prevent approximately 875 future premature cancer deaths (each year these radon reducing features are in place). EPA will track progress against the efficiency measure, included in the table above, triennially with the next planned report date in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$126.0) This change reflects restoration of the FY 2008 Omnibus 1.56% rescission and will support enhanced radon efforts in high priority radon areas.

Statutory Authority:

CAA Amendments of 1990; IRAA, Section 306; Radon Gas and Indoor Air Quality Research Act; Title IV of the SARA of 1986; TSCA, section 6, Titles II, and Title III (15 U.S.C. 2605 and 2641-2671), and Section 10.

Categorical Grant: Sector Program

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$1,360.9***	***$2,228.0***	***$1,209.0***	***$1,828.0***	***$619.0***
Total Budget Authority / Obligations	$1,360.9	$2,228.0	$1,209.0	$1,828.0	$619.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Strong state and Tribal Enforcement and Compliance Assurance programs are essential to EPA's long-term strategic objective: to identify and reduce significant noncompliance in high priority areas, while maintaining a strong enforcement presence in all regulatory program areas. Effective partnerships between EPA and government co-implementers are crucial for success in implementing sector approaches.

Sector program grants build environmental partnerships with states and tribes to strengthen their ability to address environmental and public health threats, including contaminated drinking water, pollution caused by wet weather events, pesticides in food, toxic substances, and air pollution. These capacity building grants also support state and Tribal agencies that are responsible for implementing authorized, delegated, or approved environmental programs.[7]

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue at a reduced level to support states and tribes in their efforts to build, implement, or improve compliance capacity for authorized, delegated, or approved environmental programs. The sector program also seeks to foster innovation.

FY 2009 annual funding priorities for the multi-media grants program include: 1) improving compliance data quality, 2) modernizing data systems, 3) improving public access to enforcement and compliance data, 4) improving outcome measurement, and 5) providing compliance training to tribes to enhance their compliance monitoring capacity. The grants and/or cooperative agreements are competed for nationally and each funding priority is targeted towards enhancing state and Tribal capacity and capability. Additionally, funding priority is targeted towards addressing needs that may be identified by states, tribes, or state and Tribal associations/organizations.

[7] For more information, refer to: www.epa.gov/compliance/state/grants/stag/index.html

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports EPA's objective to achieve environmental protection through compliance. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$600.0) This reflects an increase to the states for the transition to the Integrated Compliance Information System-National Pollutant Discharge Elimination System (ICIS-NPDES), especially in the area of data migration (i.e., transferring data from PCS to ICIS-NPDES and ensuring its quality). The increase would also support other efforts under this Program, for example: 1) general capacity building for states and tribal compliance and enforcement programs; 2) specialized training for states to enhance their involvement in EPA's national compliance and enforcement priorities; and 3) Air Facility System (AFS) Data Quality and Completeness activities which support the Clean Air Act (CAA) enforcement and compliance program.

- (+$19.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

RLBPHRA; RCRA; CWA; SDWA; CAA; TSCA; EPCRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA; MPRSA.

Categorical Grant: State and Local Air Quality Management

Program Area: Categorical Grants
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$208,567.3***	***$185,180.0***	***$216,825.0***	***$185,580.0***	***($31,245.0)***
Total Budget Authority / Obligations	$208,567.3	$185,180.0	$216,825.0	$185,580.0	($31,245.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

This program includes funding for multi-state, state, and local air pollution control agencies. Section 103 of the Clean Air Act provides EPA with the authority to award grants to a variety of agencies, institutions, and organizations, including the air pollution control agencies funded from the STAG appropriation, to conduct and promote certain types of research, investigations, experiments, demonstrations, surveys, studies, and training related to air pollution. Section 105 of the Clean Air Act provides EPA with the authority to award grants to state and local air pollution control agencies to develop and implement continuing programs for the prevention and control of air pollution and for the implementation of National Ambient Air Quality Standards (NAAQS) set to protect public health and the environment. The continuing programs funded under Section 105 include development and operation of air quality monitoring networks. Section 106 of the Clean Air Act provides EPA with the authority to fund interstate air pollution transport commissions to develop or carry out plans for designated air quality control Regions. Please see http://www.epa.gov/oar/caa/ for more details.

FY 2009 Activities and Performance Plan:

This program funds more than 100 state and local air pollution control agencies and an interstate air pollution transport commission to implement the requirements of the Clean Air Act. States submitted State Implementation Plans (SIPs) for the 8-hour ozone NAAQS to EPA in FY 2007 and submitted Regional haze SIPs in December 2007. States also will submit fine particle ($PM_{2.5}$) SIPs in April 2008. Although there is no definite schedule for updating SIPs, there are a number of events that trigger SIP updates. For example, when EPA promulgates a new NAAQS, states must update their SIPs within three years. In FY 2009, EPA will work with states to correct any deficiencies in their FY 2007 and FY 2008 SIP submissions, and provide technical assistance in implementing their plans for the 8-hour ozone standard, the $PM_{2.5}$ standard, and Regional haze.

In 2007, EPA proposed and requested comments on a range of options for revising the ozone standard. Any new ozone standards will be published in final form in the spring of 2008. EPA will provide assistance to state and local air agencies in developing recommendations, by the

spring of calendar year 2009, for the designations of attainment and nonattainment areas under the new standard(s). EPA will then prepare to publish *final designations* for a potential new ozone standard by the spring of 2010.

In October 2006, EPA revised the $PM_{2.5}$ NAAQS for 24-hour concentrations making it more stringent. In connection with this NAAQS revision, about 50 existing PM $_{2.5}$ monitoring sites began in FY 2008 to sample for PM $_{2.5}$ every day, instead of every third day, to provide greater accuracy in eventual attainment/nonattainment designations. Although the final rule did not revise the required numbers of PM $_{2.5}$ monitors or how they must be sited, a number of states voluntarily shifted monitoring equipment to new locations to investigate possible problem areas with respect to the revised NAAQS. As of December 2007, states submitted their recommendations to EPA regarding attainment/nonattainment status with respect to the 24-hour $PM_{2.5}$ NAAQS. In FY 2009, the states will be working with EPA to finalize designations. Once designations are complete, states will be given three years to develop and submit SIP revisions that demonstrate how and when their nonattainment areas will come into attainment.

Concurrent with the promulgation of the revised $PM_{2.5}$ NAAQS, EPA issued final regulations that eliminated or reduced a number of specific minimum requirements for air quality monitoring, especially monitoring for four NAAQS pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead, for which violations of the standards are now extremely uncommon. These regulatory changes will allow the states, with EPA oversight, to streamline their monitoring networks for these four pollutants and reduce costs. Also, EPA expects less, but still significant, streamlining of PM-10 monitoring networks, even though the minimum requirements were not changed. The number of PM-10 monitors currently in place exceeds minimum requirements, and many monitors are located in areas with low PM-10 concentrations. EPA believes that ozone and $PM_{2.5}$ networks should remain about their current size, with some shifting of sites for better data value.

The October 2006 final $PM_{2.5}$ NAAQS rule also established a new requirement for a small network of about 55 "NCore" multi-pollutant monitoring sites, which must be operational by 2011. Among other measurements, these sites are required to monitor for $PM_{10-2.5}$ mass concentrations and speciation profiles, types of monitoring not previously required anywhere. EPA and states already have been working together on a voluntary basis to establish this network. In FY 2009, more states will start selecting the sites for this newly required form of monitoring, acquire new equipment, and become proficient in its operation. Finally, as improved technologies for monitoring PM on a continuous basis are commercialized and approved as official methods, states are expected to transition to wider use of continuous methods in preference to older filter-based methods that have higher operating costs.

This program also supports state and local characterization of air toxics problems and implementation of measures to reduce health risks from air toxics. These measures include support for state efforts in implementing Maximum Available Control Technology (MACT) standards for major and area sources. Funding for the characterization work includes collection and analysis of emissions data and monitoring of ambient air toxics. In FY 2009, funds for air toxic ambient monitoring will support the National Air Toxics Trends Stations (NATTS), consisting of 24 air toxics monitoring sites operated and maintained by state and local air

pollution control agencies across the country, and the associated quality assurance, data analysis, and methods support.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.	Data Avail 2008	21	26	29	Percentage

- Achieve a 29 percent cumulative reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.

- Achieve a 23 percent cumulative reduction in the average number of days, during the ozone season, that the ozone standard is exceeded in non-attainment areas, weighted by population.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$3,500.0) This reflects EPA's transfer of ownership and operation of air sampling equipment in the California Mexico Air Monitoring Network to the State of Baja California, Mexico, and the completion of air toxics analyses for the Great Lakes. This also reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission. All priority activities in this program can be funded within base resources.

- (+$3,900.0) This funding increase supports state and local work for effective and early collaboration on energy projects to ensure the seamless integration of the Federal National Environmental Policy Act (NEPA) and state requirements, and to reduce state/Federal regulatory redundancy. This includes building expertise to effectively collaborate and negotiate in the early and later stages of energy development, and conducting needed monitoring and modeling to assess impacts and develop guidance, as related to energy development.

- (-$17,000.0) This reduction reflects a shift in grant authority used to fund the particulate matter (PM) monitoring network from Section 103 of the Clean Air Act to Section 105 and also reflects the fact that the PM network is beyond the demonstration phase and is now an operational system. Section 105 grants fund state or local air planning agencies to implement and maintain the National Ambient Air Quality Standards and require a 40% match from recipients. The Section 103 authority is specifically for research and demonstration efforts and has no matching requirement. This also reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission. All priority activities in this program can be funded within base resources.

- (-$14,645.0) This reduction reflects substantial progress that has been made in attaining the NAAQS for lead and carbon monoxide (CO). State efforts are now focused on maintaining compliance with the lead and CO NAAQS and therefore funding for these activities reflects this shift. The federal motor vehicle control program and existing state and local programs will maintain carbon monoxide at levels meeting NAAQS. In addition, new national programs, such as CAIR, will reduce SO_2 and NOx as part of the program for reducing particulate emissions and the implementation of these programs will allow states to leverage existing resources to maximize cost-effectiveness of their efforts. This also reflects the net change including restoration of the FY 2008 Omnibus 1.56% rescission. All priority activities in this program can be funded within base resources.

Statutory Authority:

CAA, Sections 103, 105, and 106.

Categorical Grant: Toxics Substances Compliance

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$5,710.3***	***$5,099.0***	***$5,019.0***	***$5,099.0***	***$80.0***
Total Budget Authority / Obligations	$5,710.3	$5,099.0	$5,019.0	$5,099.0	$80.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Toxic Substances Compliance grants program builds environmental partnerships with states and Tribes to strengthen their ability to address environmental and public health threats from toxic substances such as Polychlorinated Biphenyls (PCBs), asbestos and lead. State grants are used to ensure compliance with standards for the proper use, storage, and disposal of PCBs. Proper handling prevents persistent bio-accumulative toxic substances from contaminating food and water. The asbestos funds ensure compliance with standards to prevent exposure to school children, teachers and staff to asbestos fibers in school buildings as well as other asbestos regulations such as the Asbestos Ban and Phaseout Rule.[8] The program also assures that asbestos and lead abatement workers have received proper training and certification to ensure protection during the abatement process and minimize the public's exposure to these harmful toxic substances.

FY 2009 Activities and Performance Plan:

In FY 2009, EPA's Enforcement and Compliance Assurance program will continue to award state and Tribal compliance monitoring grants to assist in the implementation of compliance and enforcement provisions of the Toxic Substances Control Act (TSCA). These grants support state and Tribal compliance monitoring and enforcement activities to protect the public and the environment from PCBs, asbestos and lead. States receiving grants for the PCB program and for non-waiver asbestos programs must contribute 25 percent of the total cost of the grant. In FY 2009, EPA plans to continue to incorporate technology such as the use of portable personal computers to improve efficiencies of the inspection process.

[8] In July, 1989, EPA promulgated the Asbestos Ban and Phaseout Rule (40 CFR 763 Subpart 1). The 1989 EPA rule banned the U.S. manufacture, importation, processing, or distribution in commerce of many asbestos-containing product categories. The rule was vacated and remanded by the U.S. Fifth Circuit Court of Appeals in 1991. Six product categories remained banned. The six asbestos-containing product categories that are still subject to the asbestos ban include: 1) corrugated paper, 2) roll-board, 3) commercial paper, 4) specialty paper, 5) flooring felt and 6) new uses of asbestos.

The EPA Enforcement of Environmental Laws (Civil) PART program received an "adequate" rating in 2004 with the development of a measure implementation plan. In FY 2006, EPA conducted a review of enforcement and compliance measures used by states, other Federal agencies, and other countries, as well as consulting with academics and other measurement experts. The purpose of the review was to identify opportunities to improve measurement. As a result of this review, EPA is considering transitioning the Enforcement and Compliance Assurance program measures from a tool-oriented to a problem-oriented GPRA strategic architecture.

Performance Targets:

Work under this program supports EPA's objective to achieve environmental protection through compliance. Currently, there are no performance measures for this specific Program.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$80.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

TSCA.

Categorical Grant: Tribal Air Quality Management

Program Area: Categorical Grants
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$11,840.5***	***$10,940.0***	***$10,769.0***	***$13,300.0***	***$2,531.0***
Total Budget Authority / Obligations	$11,840.5	$10,940.0	$10,769.0	$13,300.0	$2,531.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

This program includes funding for Tribal air pollution control agencies and/or tribes. Through Clean Air Act (CAA) Section 105 grants, tribes may develop and implement programs for the prevention and control of air pollution or implementation of national primary and secondary ambient air standards. Through CAA Section 103 grants, Tribal air pollution control agencies or tribes, colleges, universities, or multi-tribe jurisdictional air pollution control agencies and/or non-profit organizations may conduct and promote research, investigations, experiments, demonstrations, surveys, studies and training related to air pollution. Allowable activities are described in "Guidance for Funding Air and Radiation Activities Using the STAG Appropriation," issued by the Office of Air and Radiation on November 12, 1999.

FY 2009 Activities and Performance Plan:

With EPA funding, tribes will assess environmental and public health conditions on Tribal lands and, where appropriate, site and operate air quality monitors. Tribes will continue to develop and implement air pollution control programs for their reservations, acting "as states" to prevent and address air quality concerns. EPA will continue to fund organizations for the purpose of providing technical support, tools, and training for tribes to build capacity to develop and implement programs as appropriate.

In addition, in FY 2009, Tribes will build expertise to effectively collaborate and negotiate in the early and later stages of energy development, and will conduct needed monitoring and modeling to assess impacts and develop guidance, as related to energy development.

The Air Quality Grants and Permitting Program, PARTed in 2005, received a rating of "ineffective." EPA has updated current grant allocation processes to ensure resources are properly targeted and will continue to develop measures of permit program efficiency and make program adjustments to ensure targets are met by December 2008.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.	Data Avail 2008	21	26	29	Percentage

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$2,360.0) This funding increase supports Tribal work for effective and early collaboration on energy projects to ensure the seamless integration of the Federal National Environmental Policy Act (NEPA) and Tribal requirements, and to reduce Tribal/Federal regulatory redundancy.

- (+$171.0) This total reflects restoration of the FY 2008 Omnibus 1.56% rescission and will support working with tribes on monitoring and development of clean air plans for Tribal programs.

Statutory Authority:

CAA, Sections 103 and 105.

Categorical Grant: Tribal General Assistance Program

Program Area: Categorical Grants
Goal: Compliance and Environmental Stewardship
Objective(s): Improve Human Health and the Environment in Indian Country

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$61,569.8***	***$56,925.0***	***$56,037.0***	***$57,925.0***	***$1,888.0***
Total Budget Authority / Obligations	$61,569.8	$56,925.0	$56,037.0	$57,925.0	$1,888.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

In 1992, Congress established the Indian Environmental General Assistance Program (GAP) to provide a mechanism for federal efforts to assist Tribal governments in assuring environmental protection on Indian lands. The purpose of GAP is to support development of Tribal environmental protection programs. (See http://www.epa.gov/indian/laws3.htm for more information.)

GAP provides general assistance grants to build capacity to administer environmental regulatory programs that may be authorized by EPA in Indian country and provides technical assistance in the development of multimedia programs to address environmental issues on Indian lands. GAP grants help build the basic components of a Tribal environmental program which may include planning, developing, and establishing the administrative, technical, legal, enforcement, communication and outreach infrastructure. GAP funds are used to:

- Assess the status of a tribe's environmental condition;
- Develop appropriate environmental programs and ordinances;
- Conduct public education and outreach efforts to ensure that Tribal communities are informed and able to participate in environmental decision-making; and
- Promote communication and coordination between Federal, state, local and Tribal environmental officials.

FY 2009 Activities and Performance Plan:

In FY 2009, GAP grants will assist Tribal governments to build environmental capacity to assess environmental conditions, utilize available federal and other information, and build environmental programs tailored to their needs. Additional funds will allow 9 more tribes (for a total of 526 tribes) to have access to an environmental presence in Indian country under EPA programs. These grants also will be used to develop environmental education and outreach programs, develop and implement integrated solid waste management plans, and alert EPA to serious conditions that pose immediate public health and ecological threats.

Since FY 2005, EPA has improved program accountability by implementing a new database system, the Objective 5.3 Reporting System, to standardize, centralize, and integrate regional data and assign accountability for data quality. Currently, EPA is working to develop and deploy the GAP Online work plan development and reporting system for improved data management and real-time access to grant information. This new electronic system, in conjunction with the updated guidance, helps emphasize outcome-based results.

The Tribal GAP program underwent its second PART assessment in 2007 and received an overall rating of "moderately effective." As a result, EPA has set ambitious goals and revised GAP performance measures to strengthen their relevance and accuracy.

In FY 2007, an independent program evaluation of the GAP program was conducted to determine GAP's effectiveness in building Tribal environmental capacity. The findings conclude that GAP is successful in building the foundation of environmental capacity among tribes, as defined as capability in one or more of five indicator areas – technical, legal, enforcement, administrative and communications. Although the extent of capacity building varies across indicator areas for tribes, GAP funding is essential for tribes to achieve their environmental goals. (See "Evaluation of the Tribal General Assistance Program (GAP)" http://intranet.epa.gov/Program_Evaluation_Library/pdfs/GAPFinalReport.pdf for more information.)

The Inspectors General of EPA and the Department of Interior jointly released a report in May 2007, "Tribal Successes, Protecting the Environmental and Natural Resources," which highlights successful environmental protection practices by tribes. EPA's Tribal activities were positively viewed in this report. In FY 2009, EPA will further assist tribes in establishing environmental protection through collaboration, partnerships and other practices that lead to Tribal success. (See "Tribal Success, Protecting the Environment and Natural Resources": http://www.epa.gov/oig/reports/2007/20070503-2007-P-00022JT.pdf for more information.)

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.)			21	23	Percent Tribes

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of Tribes with an environmental program (cumulative).			57	60	Percent Tribes

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Efficiency	Number of environmental programs implemented in Indian Country per million dollars.	14.1	12.5	12.5	12.3	Programs

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative).			6	7	Percent Tribes

The efficiency measure for the GAP program reads: "*Number of environmental programs implemented in Indian country per million dollars.*" This measure reflects environmental program implementation in Indian country in relation to the level of dollars available to tribes under the EPA program statutorily targeted to this objective. It is expressed as a ratio between environmental programs implemented and million dollars of GAP funding available to tribes.

- In FY 2009, EPA will operate at an efficiency of approximately 14.2 programs per million dollars. This efficiency level is consistent with the amount of funding received.

- In FY 2009, 526 Federally-recognized tribes and intertribal consortia, or 91 percent of a universe of 572 eligible entities, will have access to an environmental presence.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$1,000.0) Additional funds will allow 9 more tribes (for a total of 526 tribes) to have access to an environmental presence in Indian country under EPA programs.

- (+$888.0) This change reflects restoration of the 1.56% rescission to all program projects in addition to small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

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

Categorical Grant: Underground Injection Control (UIC)

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$10,150.8***	***$10,891.0***	***$10,721.0***	***$10,891.0***	***$170.0***
Total Budget Authority / Obligations	$10,150.8	$10,891.0	$10,721.0	$10,891.0	$170.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Underground Injection Control (UIC) program is implemented by Federal and state government agencies that oversee underground injection activities in order to prevent contamination of underground sources of drinking water. Traditional underground injection is the disposal of fluids beneath the earth's surface in porous rock formations through wells or other similar conveyance systems. Billions of gallons of fluids are injected underground, including 89% of hazardous waste that is land disposed and the practice is now being considered for long-term storage of carbon dioxide.

When wells are properly sited, constructed, and operated, underground injection is an effective method of managing fluids. The Safe Drinking Water Act established the UIC program to provide safeguards so that injection wells do not endanger current and future underground sources of drinking water. The most accessible underground fresh water is stored in shallow geological formations (*i.e.*, shallow aquifers), and is the most vulnerable to contamination.

EPA provides financial assistance in the form of grants to states that have primary enforcement authority (primacy) to implement and maintain UIC programs. Eligible Indian tribes who demonstrate intent to achieve primacy may also receive grants for the initial development of UIC programs and be designated for treatment as a "state" if their programs are approved. Where a jurisdiction is unable or unwilling to assume primacy, EPA uses grant funds for direct implementation of Federal UIC requirements. EPA directly implements programs in ten states and shares responsibility in seven states.

(See http://www.epa.gov/safewater/uic.html for more information.)

FY 2009 Activities and Performance Plan:

Ensuring safe underground injection of fluids, including waste-fluids, is a fundamental component of a comprehensive source water protection program that, in turn, is a key element in the Agency's multi-barrier approach. The UIC program continues to manage or close the approximately 700,000 shallow injection wells (Class V) to protect our ground water resources.

In 2009, states and EPA (where EPA directly implements) will continue to carry out regulatory functions for all well types. In addition, states and EPA will process UIC permit applications for experimental carbon sequestration projects and gather information from these pilots to facilitate the permitting of large scale commercial carbon sequestration in the future. Similarly, states and EPA will process UIC permits for other nontraditional injection streams such as drinking water treatment residuals, desalination brines, and treated waters injected for storage and recovered at a later time.

The Underground Injection Control Grant program underwent a PART review in 2004 and received a rating of "adequate" from OMB. The program is working to develop an annual performance measure and efficiency measure to demonstrate the protection of source water quality.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of identified Class V motor vehicle waste disposal wells closed or permitted.	85	88	90	75*	Percent of Wells

*The target reduction in FY 2009 reflects increased regional efforts to identify Class V wells. Permitting and closure efforts are not expected to decrease.

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of prohibited Class IV and high-priority, identified, potentially endangering Class V wells closed or permitted in ground-water based source water areas.	76	N/A	96	86	Percent of Wells

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment &	91.5	94	90	90	Percent of Population

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
	source water protection.					

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Output	Percentage of Class I, II, and III wells that maintain mechanical integrity without a failure that releases contaminants to underground sources of drinking water.	98	N/A	98	98	Percent of Wells

EPA also has developed annual measures for the UIC program that support the long-term targets. These measures are indicators of the effectiveness of the UIC program in preventing contamination of underground sources of drinking water (USDWs) and protecting public health. These measures demonstrate how the UIC program is helping to reduce risks to underground sources of drinking water and protect public health.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$170.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

SDWA.

Categorical Grant: Underground Storage Tanks

Program Area: Categorical Grants
Goal: Land Preservation and Restoration
Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$29,459.4***	***$22,274.0***	***$2,461.0***	***$22,800.0***	***$20,339.0***
Total Budget Authority / Obligations	$29,459.4	$22,274.0	$2,461.0	$22,800.0	$20,339.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

EPA will make grants to states under Section 2007 of the Solid Waste Disposal Act to support core program activities as well as the Energy Policy Act (EPAct) of 2005 leak prevention activities. Major activities for these Underground Storage Tank (UST) categorical grants focus on developing and maintaining state programs with sufficient authority and enforcement capabilities to operate in lieu of the Federal program, and ensuring that owners and operators routinely and correctly monitor all regulated tanks and piping in accordance with UST regulations.[9] EPA also will assist the states in implementing the EPAct provisions ensuring that states are developing operator training by August 8, 2009, conducting on-site inspections on the three-year cycle, prohibiting delivery to noncompliant tanks, and requiring either secondary containment for new tank systems or financial responsibility for manufacturers and installers. In addition, EPA will use funds for direct implementation of release detection or release prevention (spill, overfill, and corrosion protection requirements) programs on Tribal lands where EPA carries out the UST program.

There are approximately 630 thousand active USTs at approximately 238 thousand sites that are regulated by the UST technical regulations under Subtitle I of Resource Conservation and Recovery Act (RCRA). These regulations seek to ensure that USTs are designed and operated in a manner that prevents the tanks from leaking, and when leaks do occur, to detect and clean up those leaks as soon as possible. Because of the size and diversity of the regulated community, state authorities are in the best position to regulate USTs and to set priorities.[10] States have been the primary implementers of the UST program since its inception in 1984. In FY 2009, EPA will make grants or cooperative agreements to states and tribes, and/or Intertribal Consortia for activities authorized by the EPAct.[11]

[9] Refer to http://www.epa.gov/OUST /fedlaws /cfr.htm.
[10] Refer to http://www.epa.gov/swerust1/overview.htm.
[11] Refer to http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ058.109.pdf (scroll to Title XV - Ethanol And Motor Fuels, Subtitle B – Underground Storage Tank Compliance, on pages 500-513 of the pdf file).

FY 2009 Activities and Performance Plan:

In FY 2009, EPA will continue to focus attention on the need to bring all UST systems into compliance with release detection and release prevention requirements, and implement the provisions of EPAct. States will continue to use the UST categorical grant funding to implement their leak prevention and detection programs. Specifically with these UST categorical grants, states will fund such activities as:[12]

- Mandatory inspections every three years for all underground storage tanks,
- Operator training,
- Prohibition of delivery for non-complying facilities,
- Secondary containment or financial responsibility for tank manufacturers and installers,
- Seeking state program approval to operate the UST program in lieu of the Federal program,
- Approving specific technologies to detect leaks from tanks,
- Ensuring that tank owners and operators are complying with notification and other requirements, and
- Equipment compatibility.

To help prevent future releases, EPA will continue to help tribes develop the capacity to administer UST programs, such as providing funding to support training for Tribal staff and to educate owners and operators in Indian Country about UST requirements.

The UST (prevention) program received an overall PART rating of "moderately effective" in 2006. As a component of the program's improvement plan, EPA worked with its state partners to develop an efficiency measure of the annual confirmed releases per the annual underground storage tanks leak prevention costs.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Increase the rate of significant operational compliance by 1% over the previous year's target.	63%	67	68	69	percent

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	No more than 10,000 confirmed releases per year.	7,570	<10,000	<10,000	<10,000	UST releases

[12] For more information on grant guidelines under EPAct see: http://www.epa.gov/OUST/fedlaws

The program has set a challenging and ambitious goal of increasing significant operational compliance (SOC) by 1 percent per year from the 2004 baseline of 64 percent. The program did not meet the GPRA goal for the SOC rate in FY 2007 because some states inspected previously uninspected facilities in response to the EPAct, which likely led to lower compliance rates.

The program also measures confirmed releases reported each year, with a goal of fewer than 10,000 releases each year. Between FYs 1999 and 2007, confirmed UST releases averaged 9,052. In FY 2007, there were 7,570 confirmed UST releases.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$20,339.0) This increase will support prevention activities required under the Energy Policy Act of 2005 within the STAG appropriation. This is a shift between the LUST appropriation and the STAG appropriation designed to better engage the states. This change also includes restoration of the 1.56% rescission to all program projects.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Reauthorization Amendments of 1986 (Subtitle I), Section 2007(f), 42 U.S.C. 6916(f)(2); EPAct of 2005, Title XV - Ethanol And Motor Fuels, Subtitle B - Underground Storage Tank Compliance, Sections 1521 - 1533, P.L. 109-58, 42 U.S.C. 15801; Tribal Grants: P.L. 105-276.

Categorical Grant: Wetlands Program Development

Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$16,313.7***	***$16,830.0***	***$16,567.0***	***$16,830.0***	***$263.0***
Total Budget Authority / Obligations	$16,313.7	$16,830.0	$16,567.0	$16,830.0	$263.0
Total Workyears	1.0	0.0	0.0	0.0	0.0

Program Project Description:

The Wetland Program Development Grants (WPDG) enable EPA to provide technical and financial support to assist states, tribes, and local governments toward the national goal of an overall increase in the nation's wetlands. Grants are used to develop new or refine existing state and Tribal wetland monitoring, assessment, restoration, and management programs and to conduct regulatory and protection work. Grants are awarded on a competitive basis under the authority of Section 104(b)(3) of the Clean Water Act (CWA). Grants support development of state and Tribal wetland programs that further the goals of the CWA and improve water quality in watersheds throughout the country. Many states and some tribes have developed wetland protection programs that assist private landowners, educate local governments, and monitor and assess wetland quantity and quality.

(See http://www.epa.gov/owow/wetlands/initiative/#financial for more information.)

FY 2009 Activities and Performance Plan:

Achieving the strategic goal and the Administration's wetlands commitment to increase wetlands necessitates stronger state, Tribal, and local programs to monitor, manage and protect wetlands and other aquatic resources. Resources in FY 2009 will assist states and tribes to develop and enhance wetland programs. This program will help states and tribes protect vulnerable wetlands and build capacity in the areas of measuring and achieving a net gain of wetlands.

In general, the WPDG Program encourages states, tribes, territories, and local governments to pursue projects that will develop one or more of the six core elements (monitoring, regulation, water quality standards, mitigation compliance, and partnership building) that EPA has identified as comprising a comprehensive wetland program. Further explanation of these core areas can be found at http://www.epa.gov/owow/wetlands/initiative/fy02elements.html. Since FY 2006, the WPDG Program has targeted projects that develop the regulatory and monitoring core elements. In addition, EPA will be reporting the results of the state/Tribal Environmental Outcome Wetland Demonstration Pilot (WDP). The WDP is a three-year pilot, started in 2005, designed to demonstrate effectiveness of using Wetland Program Development Grants for program

implementation. The pilot is part of EPA's effort to strengthen state and Tribal capacity to protect their wetlands.

The 2006 National Wetlands Inventory Status and Trends Report, released by the U.S. Fish and Wildlife Service (FWS), reports the quantity and type of wetlands in the conterminous United States. The report shows that overall gains in wetland acres exceeded overall losses from 1998 through 2004 at a rate of 32,000 acres per year. This gain is primarily attributable to an increase in unvegetated freshwater ponds, which may have varying functional value. Additional wetland data provided in a report titled *Preserving America's Wetlands 2007: Three Years of Progress Implementing the President's Goal* (Council on Environmental Quality, April 2006), indicates that since April 2004, 2,769,000 acres have been restored, created, protected or improved. For more information consult http://www.whitehouse.gov/ceq/.

Performance Targets:

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	In partnership with the U.S. Army Corps of Engineers, states, and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory program	Data Lag	No Net Loss	No Net Loss	No Net Loss	Acres

Measure Type	Measure	FY 2007 Actual	FY 2007 Target	FY 2008 Target	FY 2009 Target	Units
Outcome	Working with partners, achieve a net increase of acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland conditions. (cumulative)	Data Lag	100,000	100,000	100,000	Acres/year

This program has not been reviewed under the PART process.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (+$263.0) This change reflects restoration of the 1.56% rescission to all program projects.

Statutory Authority:

1990 Great Lakes Critical Programs Act; 2002 Great Lakes and Lake Champlain Act; CWA; Coastal Wetlands Planning, Protection, and Restoration Act of 1990; Estuaries and Clean Waters

Act of 2000; North American Wetlands Conservation Act; WRDA; 1909 The Boundary Waters Treaty; 1978 GLWQA; 1987 GLWQA; 1996 Habitat Agenda; 1997 Canada-U.S. Great Lakes Bi-national Toxics Strategy; U.S.-Canada Agreements.

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PART Code	PART Title	Year of Assessment	Improvement Plans	
10000218	Drinking Water State Revolving Fund	2007 SPR	**Improvement Plan**	**Action Taken**
			Implement recommendations from the second triennial drinking water data quality review which are designed to improve the overall quality of the data in EPA's drinking water compliance reporting system.	Action taken, but not completed
			Develop a new long-term outcome performance measure to assess the impact of drinking water compliance improvements on public health.	Action taken, but not completed
			Develop an efficiency measure that is more useful and meaningful for tracking annual programmatic efficiency.	Action taken, but not completed
10000220	EPA Enforcement of Environmental Laws (Civil)	2007 SPR	**Improvement Plan**	**Action Taken**
			Continue to expand and improve use of statistically valid non-compliance rates.	Action taken, but not completed
			Develop meaningful baseline and targets for outcome oriented performance measures, with particular emphasis on pounds of pollutants reduced characterized for risk.	Action taken, but not completed
			Target resources based on workload analysis and take into account recommendations by the intra-agency Superfund Review completed in April 2004.	Action taken, but not completed
			Direct funds toward completion of the Permit Compliance System (PCS)	Action taken, but not completed
			EPA will consider contracting for an independent evaluation of the program that can serve as the basis for further improvements.	Action taken, but not completed
			Calculate and evaluate recidivism rates.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Direct funds toward completion of the Permit Compliance System (PCS)	Action taken, but not completed
			Begin to transition from a tool-oriented to a problem-oriented GPRA Architecture; and incorporate in the next EPA Strategic Plan.	Action taken, but not completed
10000222	EPA Tribal General Assistance Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Implementation of the GAP tracking system proceeds. Regional training will occur Sept-Dec. 2007. System evaluation and updated recommendations are scheduled for Feb. 2008, with any necessary system updates occurring in March-May 2008.	Action taken, but not completed
			Implementation of the GAP tracking system proceeds. Regional training will occur Sept-Dec. 2007. System evaluation and updated recommendations are scheduled for Feb. 2008, with any necessary system updates occurring in March-May 2008.	Action taken, but not completed
			A long term measure for GAP related to solid waste issues and activities is being developed.	Action taken, but not completed
10000224	Nonpoint Source Pollution Control Grants	2007 SPR	**Improvement Plan**	**Action Taken**
			To continue to improve this program and meet its long-term goals, EPA will focus on ensuring its funds are used for the most beneficial projects.	Action taken, but not completed
			EPA will consider contracting for an independent evaluation of the program that can serve as the basis for further improvements.	Action taken, but not completed
10000226	Toxic Air Pollutants - Regulations and Federal Support	2007 SPR	**Improvement Plan**	**Action Taken**
			Increase funding for toxic air pollutant programs by $7 million in State grants for monitoring to help fill data gaps.	Completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Focus on maximizing programmatic net benefits and minimizing the cost per deleterious health effect avoided.	Action taken, but not completed
			Establish better performance measures, including an appropriate efficiency measure.	Action taken, but not completed
			Use the newly developed efficiency measure to demonstrate efficiency improvements.	No action taken
10000228	Leaking Underground Storage Tank Cleanup Program	2007 SPR	**Improvement Plan**	**Action Taken**
			In response to initial findings that the program needed better long-term outcome goals with adequate baselines and targets, the program has been participating in an Office of Pesticide	Completed
			Seek out regular independent evaluations and a systematic process to review the program's strategic planning.	Action taken, but not completed
			Programs initiative on performance indicators. The program has proposed new measures for this reassessment.	Completed
			Backlog characterization study and potential refinement of LUST efficiency measure.	Action taken, but not completed
10000234	Pesticide Registration	2007 SPR	**Improvement Plan**	**Action Taken**
			The Administration recommends maintaining funding at the 2004 President's Budget level adjusted for the annual pay increase.	Completed
			The program will develop long-term risk-based outcome performance measures that will supplement the existing long-term measures.	Completed
			The program will also work on long-term outcome efficiency measures.	Completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Implement new strategic plan architecture into FY 08 management activities and day-to-day operations.	Action taken, but not completed
			Establish executive leads to provide senior leadership for each of the 3 mission areas in the new Strategic Plan.	Completed
			Brief staff on new Strategic Plan in order to incorporate stronger alignment between Strategic Plan individual Performance Agreement and Recognition System (PARS) agreements.	Action taken, but not completed
			Executive leads working toward the development and refinement of meaningful outcome oriented measures for each of the three mission area in the new Strategic Plan	Action taken, but not completed
10000236	Pesticide Reregistration	2007 SPR	**Improvement Plan**	**Action Taken**
			The original PART assessment found that the program was not measuring its level of efficiency. As a result, the program has proposed new output efficiency measures that will promote better management and a more direct focus on efficiently achieving outcomes.	Completed
			To address the issue of not meeting annual targets and concerns about meeting statutorily-required deadlines, the program did use additional resources for reviewing antimicrobial pesticides and inert ingredients as proposed in the FY 2004 President's Budget.	Completed
			The original PART assessment found that the program was not measuring its level of efficiency. As a result, the program has proposed new output efficiency measures that will promote better management and a more direct focus on efficiently achieving outcomes.	Completed
			Per the Agency targets develop and finalize appropriate regional performance targets.	Completed
			Implement new strategic plan architecture into FY 08 management activities and day-to-day operations.	Action taken, but not completed
			Establish executive leads to provide senior leadership for each of the 3 mission areas in the new Strategic Plan.	Completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Brief staff on new Strategic Plan in order to incorporate stronger alignment between Strategic Plan individual Performance Agreement and Recognition System (PARS) agreements.	Action taken, but not completed
			Executive leads working toward the development and refinements of meaningful outcome-oriented measures for each of the three mission areas in the new Strategic Plan	Action taken, but not completed
10000238	Superfund Removal	2007 SPR	**Improvement Plan**	**Action Taken**
			Investigate the feasibility of outcome-oriented measures that test the linkage between program activities and impacts on human health and the environment.	Action taken, but not completed
			Modernize the program's data repository (CERCLIS) to ensure accurate and complete information on program performance and financial management.	Action taken, but not completed
			Develop a plan for regular, comprehensive and independent assessments of program performance.	Action taken, but not completed
10001131	EPA Acid Rain Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Program should develop efficiency measures to track and improve overall program efficiency. Measures should consider the full cost of the program, not just the federal contribution.	Action taken, but not completed
			Remove statutory requirements that prevent program from having more impact including (but not limited to) barriers that; set maximum emissions reduction targets, exempt certain viable facilities from contributing, and limit the scope of emission reduction credit trading. The Administration's Clear Skies proposal adequately addresses these and other statutory impediments. Program should work as appropriate to promote the enactment of the Clear Skies legislation.	Action taken, but not completed
10001132	Brownfields Revitalization	2007 SPR	**Improvement Plan**	**Action Taken**
			Improve grantee use of electronic reporting systems to reduce data lags in performance information.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Conduct regional program reviews to share and implement best practices among regional offices that will improve the program's overall performance and efficiency.	Action taken, but not completed
			Complete performance measures that are under development including a new cross-agency measure that tracks brownfields redevelopment.	Action taken, but not completed
10001133	Clean Water State Revolving Fund	2007 SPR	**Improvement Plan**	**Action Taken**
			EPA will focus on improving the quality and breadth of CWSRF performance data. In particular, EPA needs to focus on collecting data on minor systems, which receive a significant proportion of CWSRF funding, and waterborne disease.	Action taken, but not completed
10001134	EPA Enforcement of Environmental Laws (Criminal)	2007 SPR	**Improvement Plan**	**Action Taken**
			Developing a baseline and targets for the outcome measure, pounds of pollutants reduced, that is characterized as to risk.	Action taken, but not completed
			Created standardized definitions (completed) and merging databases from within the agency to allow easier implementation and evaluation of measures.	Action taken, but not completed
			Developing baselines and targets to measure recidivism.	Action taken, but not completed
10001135	EPA Ecological Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Refine the questions used in independent scientific reviews to improve EPA's understanding of program utility and performance in relationship to environmental outcomes.	Action taken, but not completed
			Increase the transparency of budget, program, and performance information in budget documents.	No action taken

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop and publish a revised multi-year research plan clearly demonstrating how the program's research supports the EPA mission and avoids duplication with other research programs.	Action taken, but not completed
10001136	EPA Environmental Education	2007 SPR	**Improvement Plan**	**Action Taken**
			The administration is continuing its recommendation to terminate the program at EPA and rely on NSF programs to fulfill scientific education initiatives.	Action taken, but not completed
			The administration is continuing its recommendation to terminate the program at EPA and rely on NSF programs to fulfill scientific education initiatives.	No action taken
10001137	National Ambient Air Quality Standards Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Convene annual program reviews in which extramural expert discipline scientists and clients will assess the state of ORD science, ensure progress toward outcome goals, and determine the need for strategic mid-course adjustments to maximize program efficiency and assist with outyear planning.	Action taken, but not completed
			The program must develop at least one efficiency measure that adequately reflects the efficiency of the program.	Completed
			Improve multi-year plan (MYP) and financial data tracking systems and procedures to better and more transparently integrate grantee and program performance with financial information.	Action taken, but not completed
			Develop an annual measure that more directly demonstrates progress on toward the long-term goal of reducing uncertainty in identified research areas of high priority.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop and implement adequate methods for determining progress on the program's two new long-term measures (uncertainty and source-to-health linkage measures) as well as for the new annual measure (customer survey measure).	Action taken, but not completed
			Assess the current efficiency measure, and revise it, if necessary, to best capture the cost effectiveness of research activities.	Action taken, but not completed
10001138	Pollution Prevention and New Technologies Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Shift funding from this research program to another Environmental Protection Agency pollution prevention program that has shown results (see New Chemicals PART).	Completed
			Improve the program's strategic planning. These improvements should include a plan for independent evaluation of the program, responses to previous evaluations, and should clearly explain why the program should pursue projects instead of other capable parties.	Completed
			Establish performance measures, including efficiency measures.	Action taken, but not completed
			Develop and publish a revised multi-year research plan with an improved strategic focus and clear goals and priorities. This plan must include explicit statements of: specific issues motivating the program; broad goals and more specific tasks meant to address the issue; priorities among goals and activities; human and capital resources anticipated; and intended program outcomes against which success may later be assessed.	Action taken, but not completed
			Institute a plan for regular, external reviews of the quality of the program's research and research performers, including a plan to use the results from these reviews to guide future program decisions.	Completed
			Assess the current efficiency measure, and revise it, if necessary, to best capture the cost effectiveness of research activities.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Implement follow-up recommendations resulting from the Technology for Sustainability Subcommittee Board of Scientific Counselors (BOSC) review. Follow up actions are those actions committed to in the Pollution Prevention and New Technologies Research Assessment program's formal response to the BOSC	No action taken
10001139	Resource Conservation and Recovery Act Corrective Action	2007 SPR	**Improvement Plan**	**Action Taken**
			Program must define a new baseline for performance measures and establish appropriate annual targets to make goals more ambitious in achieving long-term objectives of the program.	Completed
			Program should establish appropriate efficiency measures to adequately track program efficiency over time.	Completed
10002272	Alaska Native Village Water Infrastructure	2007 SPR	**Improvement Plan**	**Action Taken**
			Correcting incomplete data fields and reporting deficiencies in database to support analysis for cost effectiveness and efficiency by January 30, 2007.	Action taken, but not completed
			Finalizing web based project reporting system to include all projects funded by EPA dollars by April 30, 2007.	Action taken, but not completed
			EPA will develop regulations for the management and oversight of the program, including all grant funds to the State of Alaska and any subsidiary recipients of EPA funds via the State of Alaska. By March 1, 2007, EPA shall provide a draft regulation to OMB for review and comment.	Action taken, but not completed
			The program will issue a contract for an independent review of the Alaska Native Tribal Health Consortium financial processes and records. The independent review will begin in January 2007.	Action taken, but not completed
			Develop an annual programmatic efficiency measure, which managers will find useful for improving operational performance of the program.	No action taken

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PART Code	PART Title	Year of Assessment	Improvement Plans	
10002274	EPA Climate Change Programs	2007 SPR	**Improvement Plan**	**Action Taken**
			EPA will complete an assessment and comparison of the potential benefits and efforts of the Clean Automotive Technology program to other agency's efforts with similar goals by April 1, 2005.	Action taken, but not completed
			The Clean Automotive Technology program will work to develop better performance measures that more clearly link to greenhouse gas reduction potential in the near term.	Action taken, but not completed
10002276	Public Water System Supervision Grant Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Implement recommendations from the second triennial drinking water data quality review which are designed to improve the overall quality of the data in EPA´s drinking water compliance reporting system.	Action taken, but not completed
			Develop a new long-term outcome performance measure to assess the impact of drinking water compliance improvements on public health.	Action taken, but not completed
			Develop an efficiency measure that is more useful and meaningful for tracking annual programmatic efficiency.	No action taken
10002278	Underground Injection Control Grant Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop an outcome-based annual performance measure and an efficiency measure, which demonstrate the protection of source water quality.	Action taken, but not completed
			Implement recommendations from the second triennial drinking water data quality review which are designed to improve the overall quality of the data in EPA's drinking water compliance reporting system.	Action taken, but not completed
			Develop an efficiency measure that is more useful and meaningful for tracking annual programmatic efficiency.	No action taken

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PART Code	PART Title	Year of Assessment	Improvement Plans	
10002280	Endocrine Disruptors	2007 SPR	**Improvement Plan**	**Action Taken**
			Maintain funding at approximately the FY 2005 President's Budget level.	Completed
			Articulate clearly R&D priorities to ensure compelling, merit-based justifications for funding allocations.	Completed
			By the end of CY 2006, develop baseline data for an efficiency measure that compares dollars/labor hours in validating chemical assays.	Completed
			By the end of CY 2007, collect data for first year of new contracts and compare to baseline efficiency measures.	Action taken, but not completed
10002282	U. S.-Mexico Border Water Infrastructure	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop baselines and targets for its long-term and efficiency measures.	Completed
			Follow-up on the results of the business process review to help EPA implement program changes that could improve effectiveness.	Completed
			Implement a new program requirement that detailed project schedules be included in future subgrant agreements.	Action taken, but not completed
			Implement program management controls that expedite project completions.	Action taken, but not completed
10002284	Mobile Source Air Pollution Standards and Certification	2007 SPR	**Improvement Plan**	**Action Taken**
			Request $66 million for EPA's mobile source programs, $1.5 million more than the 2005 President's Budget request.	Completed
			Systematically review existing regulations to maintain consistency and ensure that regulations maximize net benefits. Conduct thorough ex ante economic analyses and evaluations of alternatives in support of regulatory development.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Begin collecting data to support two new efficiency measures - one long and one short-term - to enable the program to measure further efficiency improvements.	Action taken, but not completed
10002286	EPA Pesticide Enforcement Grant Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Work to develop appropriate outcome performance measures.	Completed
			Develop targets and baselines.	Action taken, but not completed
			Evaluate why cost effectiveness appears inversely proportional to amount of Federal funding.	Action taken, but not completed
10002288	EPA's Recycling, Waste Minimization, and Waste Management Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop an efficiency measure for the waste minimization component of the RCRA base program.	Action taken, but not completed
			Continuously improving the program by identifying where compliance costs are excessive and reducing the cost of compliance where appropriate (i.e. RCRA manifest rule).	Action taken, but not completed
			Develop a new regulatory definition of solid waste that satisfies the judicial requirements while ensuring that costs are not inappropriately shifted to the Superfund or other corrective action programs by narrowing the exclusion of previously regulated substances.	Action taken, but not completed
10002290	Stratospheric Ozone Protection	2007 SPR	**Improvement Plan**	**Action Taken**
			Convert long-term health effects measure into a rate of skin cancer prevalence so that an actual baseline can be established once statistics are available.	Completed
			Continue to support the Multilateral Fund for the Implementation of the Montreal Protocol.	Action taken, but not completed

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PART Code	PART Title	Year of Assessment	Improvement Plans	
			Continue to monitor progress to ensure that the program is on track to meet goals.	Action taken, but not completed
			Program will develop a performance measure and targets to track intermediate outcomes by measuring "thickness" of the ozone layer in the atmosphere. Many of the program's outcome performance measures are extremely long-term, so it is important to establish measurable performance objectives for the near term.	Action taken, but not completed
			Program will develop a long-term performance measure and set ambitious targets for reduced incidence of non-melanoma skin cancers.	Action taken, but not completed
10002292	Superfund Remedial Action	2007 SPR	**Improvement Plan**	**Action Taken**
			Implement the recommendations of the Agency's 120-day study on management of the Superfund program.	Action taken, but not completed
			Modernize the program's data repository (CERCLIS) to ensure accurate and complete information on program performance and financial management.	Action taken, but not completed
			Validate the reporting method for performance data and develop a new Superfund cleanup efficiency measure.	Action taken, but not completed
10002426	Pesticide Field Programs	2007 SPR	**Improvement Plan**	**Action Taken**
			Include a $1 million reduction in funding for the Field Programs WQ program in the FY 2006 President's Budget. EPA must ensure that WQ program activities affected by this reduction are adequately addressed in the Office of Water's Surface Water Protection program.	Completed
			Make the Field Programs budgeting more transparent and more clearly link to adequate and relevant program-specific measures.	Completed
			Develop and implement annual goals and efficiency measures and continue development of baselines and targets for long-term outcome measures for all Field Programs.	Completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop and implement a method of compiling and disseminating Field Programs grantee performance data in a manner easily accessible to the public. EPA worked with states to develop a simplified, electronic, EOY reporting system for worker safety activities. Will expand to other field programs by EOY 2007.	Completed
			Implement new strategic plan architecture into FY 08 management activities and day-to-day operations.	Action taken, but not completed
			Establish executive leads to provide senior leadership for each of the 3 mission areas in the new Strategic Plan.	Completed
			Establish executive leads to provide senior leadership for each of the 3 mission areas in the new Strategic Plan.	Action taken, but not completed
			Brief staff on new Strategic Plan in order to incorporate stronger alignment between Strategic Plan individual Performance Agreement and Recognition System (PARS) agreements.	Action taken, but not completed
			Executive leads working toward the development and refinement of meaningful outcome oriented measures for each of the three mission areas in the new Strategic Plan	Action taken, but not completed
10004301	Drinking Water Protection Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Developing a long-term outcome performance measure to assess the public health impacts of improvements in drinking water compliance.	Action taken, but not completed
			Revising the current drinking water small system affordability methodology to address negative distributional impacts.	Action taken, but not completed
			Implementing data quality review recommendations to improve the overall quality of the data in EPA's drinking water compliance reporting system.	Action taken, but not completed
			The program is developing an efficiency measure that is more useful and meaningful for tracking annual programmatic efficiency.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
10004302	Chesapeake Bay Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Investigating potential methods to more transparently characterize the uncertainty of the watershed and water quality models, ideally leading to implementation of a method, if feasible.	Action taken, but not completed
			Developing a comprehensive implementation strategy that is coordinated between program partners and accurately accounts for available resources.	Action taken, but not completed
			Promoting and tracking implementation of the most cost effective restoration activities to maximize water quality improvements.	Action taken, but not completed
10004303	Underground Storage Tank Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Underground Storage Tanks Improvement Plan	Action taken, but not completed
10004304	Pollution Prevention Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Evaluate Science Advisory Board Report recommendations for improving performance measures to better demonstrate P2 results.	Action taken, but not completed
			Identifying and reducing barriers associated with core EPA activities that limit implementation of pollution prevention practices by industry.	Action taken, but not completed
			Developing additional P2 Program efficiency measures to expand the portion of the program's resources that are addressed.	Action taken, but not completed
			Fully implement Grant Trak and P2 State Reporting System. Obtain consistent 2007 results from Regions.	Action taken, but not completed
10004305	Land Protection and Restoration Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Finalize ambitious, long-term outcome performance measures that assess the utility of the program's research products and services with respect to the outcome goals of its clients.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop and implement a protocol for more frequent review and use of financial and performance tracking data to improve budget-performance integration.	Action taken, but not completed
			Develop a new efficiency measure that captures the cost effectiveness of research activities.	Action taken, but not completed
10004306	Water Quality Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Finalize ambitious long-term outcome performance measures, which assess the utility of the program's research products and services with respect to the outcome goals of its clients.	Action taken, but not completed
			Developing and implementing a protocol for more frequent review and use of financial and performance tracking data to improve budget and performance integration.	Action taken, but not completed
			Develop a new outcome efficiency measure that captures the cost effectiveness of research activities.	Action taken, but not completed
			Improve the collection of partner performance information to more clearly link to programmatic goals so managers can take appropriate actions to improve overall program performance.	Action taken, but not completed
10004307	Global Change Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Finalize ambitious long-term outcome measures that assess the utility of the program's research products and services with respect to the outcome goals of its clients.	Action taken, but not completed
			More clearly define the program's framework and mission to help focus assessment efforts and provide structure for setting priorities.	Action taken, but not completed
			Develop an efficiency measure that captures the cost effectiveness of research activities.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop and implement a protocol for more frequent review and use of financial and performance tracking data to improve budget-performance integration.	Action taken, but not completed
10004308	Human Health Risk Assessment Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Expand efficiency measure to include all major work products.	Action taken, but not completed
			Implement new IRIS review process.	Action taken, but not completed
			Implement regular, independent evaluations that assess the program's effectiveness specifically related to its influence on key risk management decisions made by the Agency's environmental media offices.	Action taken, but not completed
			Investigate alternative approaches for measuring progress related to providing timely, high quality scientific assessments.	Action taken, but not completed
10004370	Ocean, Coastal, and Estuary Protection	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop an annual performance measure for the Ocean Dumping Program.	Action taken, but not completed
			Develop an additional performance measure for non-estuary program activities.	Action taken, but not completed
			Developing more ambitious targets for the National Estuary Program's annual and long term measures on habitat acres protected and restored.	Action taken, but not completed
10004371	Drinking Water Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop baselines and targets for all long term and annual performance measures. These will allow the program to set quantitative goals and assess progress through time.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop a performance measure which tracks the efficiency with which the program delivers its services to its primary client, the EPA Office of Water.	Completed
			Improve oversight of non-grant partners and require non-grant partners to work towards the annual and long term goals of the program.	Action taken, but not completed
			Assess the current efficiency measure, and revise it, if necessary, to best capture the cost effectiveness of research activities.	Action taken, but not completed
10004372	EPA Support for Cleanup of Federal Facilities	2007 SPR	**Improvement Plan**	**Action Taken**
			Work with other Federal agencies to support attainment of long-term environmental and human health goals.	Completed
			Conduct one evaluation on an aspect of the program to identify areas and means for program improvements.	Completed
			Explore with DOE and DOD the development of cross-program revitalization measures.	Action taken, but not completed
			Work with Fed. Fac. to evaluate their progress toward achieving environmental goals.	Action taken, but not completed
			Improve program management	Action taken, but not completed
10004373	EPA Human Health Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Improve ability to link budget resources to annual and long-term performance targets by requesting and reporting Human Health research and Ecosystem research funding as separate program-projects.	Completed
			Develop ambitious long-term performance targets that clearly define what outcomes would represent a successful program.	Completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Implement follow up recommendations resulting from external expert review by the Human Health Subcommittee of the Board of Scientific Counselors (BOSC). Follow up actions are those actions committed to in the Human Health Research program's formal response to the BOSC in September 2005.	Completed
			Implement follow-up recommendations resulting from the Human Health Subcommittee Board of Scientific Counselors (BOSC) mid-cycle review. Follow up actions are those actions committed to in the Human Health Research program's formal response to the BOSC.	Action taken, but not completed
			Establish formal baselines for the program's BOSC-informed long-term measures at the next comprehensive BOSC review.	Action taken, but not completed
			Increase the transparency of budget, program, and performance information in budget documents.	No action taken
10004374	EPA Indoor Air Quality	2007 SPR	**Improvement Plan**	**Action Taken**
			Link budget requests more explicitly to accomplishment of performance goals, specifically by stipulating how adjustments to resource levels would impact performance.	Action taken, but not completed
			Improve transparency by making State radon grantee performance data available to the public via a website or other easily accessible means.	Action taken, but not completed
			Use efficiency measures to demonstrate improved efficiencies or cost effectiveness in achieving program goals.	Action taken, but not completed
10004375	EPA Lead-Based Paint Risk Reduction Program	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop and implement a method of measuring the impacts of the program's outreach and education efforts.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Improve the consistency of grantee and regional office accountability mechanisms and develop a system that ensures all relevant performance data from grantees and the Regional offices is being collected for the purposes of focusing program actions.	Completed
			Improve the linkage between program funding and the associated contributions towards progress in achieving program goals, especially for program grant and contractor funding.	Completed
			Refine/Improve measures used in State Grant Reporting Template to improve accountability of program partners for achievement of program goals.	Action taken, but not completed
			Further improve results reporting from program partners.	Action taken, but not completed
10004376	National Ambient Air Quality Standards and Regional Haze Programs	2007 SPR	**Improvement Plan**	**Action Taken**
			Implement improvements within current statutory limitations that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority.	Action taken, but not completed
			Improve the linkage between program funding and the associated contributions towards progress in achieving program goals.	Action taken, but not completed
			Develop at least one efficiency measure that adequately reflects program efficiency.	Action taken, but not completed
10004377	Air Quality Grants and Permitting	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop at least one efficiency measure that adequately reflects program efficiency.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop a measure that assesses the State permitting programs' quality, efficiency, and compliance.	Action taken, but not completed
			Develop policy and criteria for transitioning the fine particulate matter (PM2.5) monitoring program from Clean Air Act Section 103 grant funding to Clean Air Act Section 105 grant funding.	Action taken, but not completed
			Review and update current grant allocation processes to ensure resources are properly targeted.	Action taken, but not completed
10004378	EPA Oil Spill Control	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop a second long-term outcome measure and at least one annual outcome measure.	Action taken, but not completed
			Develop stronger strategic planning procedures to ensure continuous improvement in the program, including regular procedures that will track and document key decisions and work products.	Action taken, but not completed
			Evaluate the data quality of key data sources used by the program to improve the accuracy and reliability of performance information.	Action taken, but not completed
			Develop a forum for sharing and implementing best practices among regional offices that will improve the program's overall performance and efficiency.	Action taken, but not completed
10004379	Water Pollution Control Grants	2007 SPR	**Improvement Plan**	**Action Taken**
			Target additional program funding to States implementing probabilistic monitoring activities in support of the national probabilistic monitoring survey.	Action taken, but not completed
			Require that State workplans and performance data are formatted and reported consistently and directly support specific goals in EPA's strategic plan.	Completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Provide incentives for States to implement or improve their permit fee programs, increasing the resources available for water quality programs.	Action taken, but not completed
10004380	Surface Water Protection	2007 SPR	**Improvement Plan**	**Action Taken**
			Require that 106 State workplans and performance data are formatted and reported consistently and directly support specific goals in EPA's strategic plan.	Action taken, but not completed
			Working with States and other partners, EPA will assess 100% of rivers, lakes, and streams in the lower 48 states using statistically-valid surveys by 2010.	Action taken, but not completed
			Working with States and other partners, EPA will issue water quality reports based on the statistically-valid surveys in the lower 48 states by 2011.	Action taken, but not completed
10009010	EPA Great Lakes Program	2007 SPR	**Improvement Plan**	**Action Taken**
			By the end of September, the program will present and analysis of major radiological monitoring activities at EPA and other federal agencies, exploring complementary efficiencies and potential redundancies.	No action taken
10009011	EPA Radiation Protection Program	2007 SPR	**Improvement Plan**	**Action Taken**
			By the end of September, the program will present an analysis of major radiological monitoring activity at EPA and other Federal agencies, exploring complementary efficiencies and potential redundancies.	No action taken
10009012	EPA Pesticides and Toxics Research	2007 SPR	**Improvement Plan**	**Action Taken**
			Develop a formal response to the Board of Scientific Counselors (BOSC) independent expert review report, address action items, and make progress toward long-term and annual targets.	No action taken
			Assess the current efficiency measure and revise it, if necessary, to best capture the cost effectiveness of research activities.	Action taken, but not completed

PART Improvement Plans- Spring Update Report

PART Code	PART Title	Year of Assessment	Improvement Plans	
			Develop a system to utilize quarterly performance measurement reporting to improve program performance rather than solely revising annual and long-term plans.	No action taken
			Develop a system to utilize quarterly performance measurement reporting to improve program performance rather than solely revising annual and long-term plans.	No action taken
10009064	EPA Chemical Risk Review and Reduction	2007 SPR	**Improvement Plan**	**Action Taken**
			Program will develop a biomonitoring performance measure with NHANES data from the Center for Disease Control or other biomonitoring data (NATA) for chemicals of concern.	No action taken
			Risk Screening Environmental Model will be updated annually to reflect updated TRI data to ensure performance measures are updated within 2 years that rely on TRI data.	Action taken, but not completed
			Develop long-term and annual performance measures to reflect risk-based recommendations for HPV Chemicals	Action taken, but not completed

Supplemental PART Information

PART Measures	Year Data Available
Supplemental PART Information	
Goal 1: Clean Air and Global Climate Change	
Long-Term Performance Measure	
Elimination of U.S. consumption of Class II Ozone Depleting substances measured in tons/yr. of Ozone Depleting Potential (ODP).	FY 2010
Estimated future premature lung cancer deaths prevented annually through lowered radon exposure.	FY 2012
Million metric tons of carbon equivalent (mmcte) of greenhouse gas in the building sector.	FY 2012
Million metric tons of carbon equivalent (mmtce) of greenhouse gas in the industry sector.	FY 2012
Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	FY 2012
Millions of tons of nitrogen oxides (NOX) reduced since 2000 from mobile sources.	FY 2010
Millions of tons of volatile organic compounds (VOCs) reduced since 2000 from mobile sources.	FY 2010
Percent improvement in visibility on 20% worst days, on average for all eastern Class I areas.	FY 2018
Percent of change in number of chronically acidic waterbodies in acid sensitive regions.	FY 2030
Percent reduction in population-weighted ambient concentration of fine particulate matter (PM 2.5) in all monitored counties from 2003 baseline.	FY 2015
Percent reduction in population-weighted ambient concentration of ozone in all monitored counties from 2003 baseline.	FY 2015
Percentage of ORD-developed outputs appearing in the Office of Air and Radiation National Ambient Air Quality Standard Staff Paper (SP)	None
Percentage reduction in tons toxicity-weighted cancer risk emissions from 1993 baseline.	FY 2010
Percentage reduction in tons toxicity-weighted of non-cancer risk emissions from 1993 baseline.	FY 2010
Progress in assessing the linkage between health impacts and air pollutant sources and reducing the uncertainties that impede the	UD

PART Measures	Year Data Available
understanding and usefuleness of these linkages.	
Progress toward reducing uncertainty in the science that supports standard setting and air quality management decisions.	UD
Reductions in melanoma and non-melanoma skin cancers, measured by millions of skin cancer cases avoided (melanoma and nonmelanoma).	FY 2010
Tons of fine particulate matter (PM 2.5) since 2000 from mobile sources.	FY 2010
Tons of sulfur dioxide emissions reduced from electric power generating sources.	FY 2010
Annual Performance Measure	
Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health.	70
Efficiency Performance Measure	
Percent reduction in time (days) per certificate approval for large engines (nonroad Compression Ignition , Heavy duty gas and diesel engines)	FY 2012
Tons of pollutants (VOC, NOX, PM, CO) reduced per total emission reduction dollars spent.	UD
Tons of toxicity-wieghted (for cancer and noncancer risk) emissions reduced per total cost ($).	UD
Goal 2: Clean and Safe Water	
Long-Term Performance Measure	
100% percent of serviceable rural Alaska homes will have access to drinking water supply and wastewater disposal.	FY 2011
CWSRF Long-Term Revolving Level ($billions/yr)	FY 2011
DWSRF Long-Term Revolving Level ($billions/yr)	FY 2018
Indep. Exp. Rev. Panel summary score on tool designed to measure the use of ORD data, tools, and technologies for key decisions leading to scientifically-sound 6 Year Review Decisions made by OW	UD
Indep. Exp. Rev. Panel summary score on tool designed to measure the use of ORD data, tools, and technologies for key decisions leading to scientifically-sound CCL decisions made by the OW	UD
National Coastal Condition Report (NCCR) score for overall aquatic	FY2011

PART Measures	Year Data Available
ecosystem health of coastal waters nationally (1-5 scale).	
Number of baseline monitoring stations showing improved water quality in tribal waters.	FY 2012
Number of waterbodies identified by States (in 2000 or subsequent years) as being primarily NPS-impaired that are partially or fully restored.	FY2012
Number of waterbody segments identified in 2002 as not attaining standards, where water quality standards are now fully attained.	FY 2012
Percent of Alaska population served by public water systems in compliance with Safe Drinking Water Act regulatory requirements.	FY 2011
Percent of community water systems for which minimized risk to public health through source water protection is achieved.	FY 2011
Percent of homes on tribal lands lacking access to basic sanitation.	FY 2011
Percent of homes on tribal lands lacking access to safe drinking water.	FY 2011
Percentage of WQRP publications in high impact journals.	None
Percentage of WQRP publications rated as highly cited publications.	None
Section 319 funds ($ million) expended per partially or fully restored waterbody.	FY2012
Annual Performance Measure	
Percent of data for violations of health-based standards at public water systems that is accurate and complete in SDWIS/FED for all MCL and TT rules.	FY 2011
Percentage of research products used by the Office of Water as the basis of or in support of Contaminant Candidate List Decisions.	UD
Percentage of research products used by the Office of Water as the basis of or in support of Six Year Review Decisions.	UD
Efficiency Performance Measure	
Average funding (millions of dollars) per project initiating operations	FY 2012
Dollars per well to move Class V wells back into compliance	FY2011
Number of waterbodies protected per million dollars of CWSRF assistance provided (under development)	FY2011
Number of waterbodies restored or improved per million dollars of	FY2011

PART Measures	Year Data Available
CWSRF assistance provided (under development)	
People receiving drinking water that meets all applicable health-based standards per million dollars spent to manage the national drinking water program.	FY 2011
Goal 3: Land Preservation and Restoration	
Long-Term Performance Measure	
Acres of land ready for re-use at Superfund sites.	FY 2010
Federal Facility Superfund sites with contaminated groundwater under control (exposure pathways eliminated or potential exposures under health-based levels for current use of land/water resources.	FY 2011
Federal Facility Superfund sites with human exposures under control (exposure pathways are eliminated or potential exposures are under health-based levels for current use of land or water resources).	FY 2011
Gallons of oil spilled to navigable waters by facilities subject to the Facility Response Plan (FRP) regulations.	FY 2011
Increase the number of cleanups that meet state risk-based standards for human exposure and groundwater migration on Indian County.	FY 2011
Percent of all FRP facilities inspected (and presumed then to be in compliance).	FY 2011
Percentage of Land publications in high impact journals.	None
Percentage of Land publications rated as highly cited publications.	None
Total Superfund-lead removal actions completed.	FY 2011
Total voluntary removal actions, overseen by EPA, completed.	FY 2011
Efficiency Performance Measure	
Cleanups complete (3-year rolling average) per total cleanup dollars.	UD
Number of annual confirmed UST releases per federal, state and territorial costs.	UD
Goal 4: Healthy Communities and Ecosystems	
Long-Term Performance Measure	
% of peer-reviewed EPA RAs where ORD methods, models or data for assessing risk to susceptible subpops is cited as supporting a decision to move away from or apply default risk assessment assumptions	3.5

PART Measures	Year Data Available
% of peer-reviewed EPA risk assessments in which ORD's characterization of aggregate/cumulative risk is cited as supporting a decision to move away from or to apply default risk assessment assumptions	5.5
Acres protected or restored in NEP study areas. (incremental)	FY2011
Assessed or cleaned Brownfields properties redeveloped.	UD
Average cost and average time to produce or update an Endangered Species Bulletin	FY2011
By 2012, provide safe drinking water to 25% of homes in the U.S. Mexico border area that lacked access to safe drinking water in 2003.	FY 2011
By 2012, provide wastewater sanitation to 25% of homes in the U.S. Mexico border area that lacked access to wastewater sanitation in 2003.	FY 2011
Cumulative number of chemicals for which proposed values for Acute Exposure Guidelines Levels (AEGL) have been developed.	FY2011
Cumulative reduction in the production adjusted risk based score of releases and transfers of toxic chemicals from manufacturing facilities.	FY2011
Cumulative reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	FY2011
Determination of the extent of the impact of endocrine disruptors on humans, wildlife, and the environment to better inform the federal and scientific communities.	UD
Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems.	FY2011
Number of Areas of Concern in the Great Lakes Basin which are restored and de-listed.	FY2011
Number of Beneficial Use Impairments removed within Areas of Concern.	FY2011
Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl)	FY2010
Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old.	FY2012
Percent of Dissolved Oxygen goal of 100% standards attainment achieved, based on annual monitoring from the previous calendar year	FY 2011

PART Measures	Year Data Available
and the preceding 2 years.	
Percent of agricultural watersheds that exceeds EPA aquatic life benchmarks for two key pesticides of concern.	FY2011
Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	FY2011
Percent of submerged Aquatic Vegetation goal of 185,000 acres achieved, based on annual monitoring from previous goal.	FY 2011
Percentage of Global publications in high impact journals.	24.6
Percentage of Global publications rated as highly cited publications.	23
Percentage of peer-reviewed EPA risk assessments in which ORD's mechanistic information is cited as supporting a decision to move away from or to apply default risk assessment assumptions.	16.5
Percentage of regulatory decisions in which decision-makers used HHRA peer-reviewed health assessments.	None
Reduce the number of currently exceeded water quality standards met in shared and transboundary surface waters.	FY 2012
Reduced cost per pesticide occupational incident avoided	FY2011
Reduction in PFOA, PFOA precursors, and related higher homologue chemicals in facility emissions by PFOA Stewardship program participants.	FY2010
Reduction in uncertainty regarding the effects, exposure, assessment, and management of endocrine disruptors so that EPA has a sound scientific foundation for environmental decision-making	UD
States use a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of programs and policies.	None
Usefulness of HHRA's Air Quality Criteria Documents (AQCDs), represented by the number of days between the completion of AQCD peer review and publication of the EPA staff document that relies on AQCD	>60
Utility of ORD's causal diagnosis tools and methods for States, tribes, and relevant EPA offices to determine causes of ecological degradation and achieve positive environmental outcomes.	Exceeds Exp
Utility of ORD's environmental forecasting tools and methods for	Exceeds Exp

PART Measures	Year Data Available
States, tribes, and relevant EPA offices to forecast the ecological impacts of various actions and achieve environmental outcomes.	
Utility of ORD's environmental restoration and services tools and methods for States, tribes, and relevant EPA offices to protect and restore ecological condition and services.	Exceeds Exp
Utility of ORD's methods and models for risk assessors and risk managers to evaluate the effectiveness of public health outcomes.	None
Utility of ORD's methods, model, and data for risk assessors/risk managers to characterize aggregate and cumulative risk in order to manage risk of humans exposed to multiple environmental stressors.	None
Utility of ORD's methods, models, and data for OPPTS and other organizations to make decisions related to products of biotechnology.	None
Utility of ORD's methods, models, and data for OPPTS and other organizations to make probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants	None
Utility of ORD's methods, models, and data for risk assessors and risk managers to characterize and provide adequate protection for susceptible subpopulations.	None
Utility of ORD's methods, models, and data for risk assessors and risk managers to use mechanistic (mode of action) information to reduce uncertainty in risk assessment .	None
Utility of ORD's methods, models, and data under SP2's long-term goal one for OPPTS and other organizations.	None
Efficiency Performance Measure	
Acres of brownfields made ready for reuse per million dollars.	UD
Goal 5: Compliance and Environmental Stewardship	
Long-Term Performance Measure	
Change in behavior to use Improved management practices. (criminal enf)	FY 2007
Cumulative business, institutional and government costs reduced by P2 program participants	FY2011
Cumulative pounds of hazardous materials reduced by P2 program participants	FY2011
Number of states adopting or aligning Guidelines for Learning curricula	FY 2008

PART Measures	Year Data Available
and standards to state academic standards or number of states developing new env edu standards based on Guidelines for Learning.	
Percent of all students and teachers targeted demonstrate increased environmental knowledge, as measured by Guidelines for Learning K-12, developed by North American Assoc for Environmental Education.	FY 2008
Pounds of pollution reduced, treated, or eliminated. (civil enf)	FY 2007
Pounds of pollution reduced, treated, or eliminated. (criminal enf)	FY 2007
Reduction in recidivism. (criminal enf)	FY 2007
Annual Performance Measure	
Number of NNEMS fellows who pursue environmental careers.	FY 2007
Change in behavior to use Improved Management practices. (criminal enf)	FY 2007
Percent of compliance actions taken as a result of inspection/enforcement. (pest. enf)	FY 2007
Percent of violators committing subsequent violations. (pest. enf)	FY 2007
Pollutant impact.	FY2008
Pounds of pollution reduced, treated or eliminated. (criminal enf)	FY 2007
Reduction in recidivism (criminal enf).	FY 2007
Efficiency Performance Measure	
Increase the efficiency of reducing, treating, or eliminating pollutants and generating enforcement outcomes through the effective allocation and utilization of resources.	2009
Number of enforcement actions taken (Federal + State) per million dollars of cost (Federal + State). (pest enf)	FY 2007
Pounds of pollutant reduction per FTE. (criminal enf)	FY 2007
Pounds of pollutants reduced, treated, or eliminated per FTE. (civil enf)	FY 2007
Ratio of number of students/teachers that have improved environmental knowledge per total dollars expended.	FY 2008

GOAL 1: CLEAN AIR AND GLOBAL CLIMATE CHANGE

Protect and improve the air so it is healthy to breathe and risks to human health and the environment are reduced. Reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.

OBJECTIVE: HEALTHIER OUTDOOR AIR

Through 2011, working with partners, protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants.

Air Quality Index

In 2009 *Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.*

In 2008 *Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.*

In 2007 *Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.*

In 2006 *Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.	17	39	21	Data Avail 2008	26	29	Percentage

Background: Baseline was zero in 2003.

4-Year Performance Data
Annual Performance Goals and Measures

Reduce Exposure to Unhealthy PM Levels - PM-10

In 2009 *Tons of particulate matter (PM-10) reduced since 2000 from mobile sources.*

In 2008 *Tons of particulate matter (PM-10) reduced since 2000 from mobile sources.*

In 2007 *Tons of particulate matter (PM-10) reduced since 2000 from mobile sources.*

In 2006 *The number of people living in areas with monitored ambient PM concentrations below the NAAQS for the PM-10 standard will increase by 4% (relative to 2005) for a cumulative total of 11% (relative to 1992).*

	FY 2006		FY 2007		FY 2008	FY 2009	
Performance Measures	Target	Actual	Target	Actual	Target	Target	Unit
Tons of PM-10 Reduced since 2000 from Mobile Sources	74,594	74,594	87,026	Data Avail 2008	99,458	110,190	Tons

Background: In FY 2005, the 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for PM-10 from mobile source is 613,000 tons.

Reduce Exposure to Unhealthy Ozone Levels - 8 Hour

In 2009 *Cumulative percent reduction in population-weighted ambient concentration of ozone in all monitored counties from 2003 baseline.*

In 2008 *Cumulative percent reduction in population-weighted ambient concentration of ozone in all monitored counties from 2003 baseline.*

In 2007 *The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the 8-hour ozone standard.*

In 2006 *The number of people living in areas with monitored ambient ozone concentrations below the NAAQS for the 8-hour ozone standard will increase by 1% (relative to 2005) for a cumulative total of 8% (relative to 2001).*

	FY 2006		FY 2007		FY 2008	FY 2009	
Performance Measures	Target	Actual	Target	Actual	Target	Target	Unit
Cumulative percent reduction in population-weighted	5	7	6	Data Avail 2008	8	10	Percentage

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
ambient concentration of ozone in monitored counties from 2003 baseline.							
Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	1.01 M	1.01 M	1.18M	Data Avail 2008	1.35M	1.52M	Tons
Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	1.03 M	1.03 M	1.20M	Data Avail 2008	1.37M	1.54M	Tons
Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources	2.03 M	2.03	2.37M	Data Avail 2008	2.71M	3.05M	Tons

Background: The ozone concentration measure reflects improvements (reductions) in ambient ozone concentrations across all monitored counties, weighted by the populations in those areas. To calculate the weighting, pollutant concentrations in monitored counties are multiplied by the associated county populations. The units for this measure are therefore, "million people parts per billion. The 2003 baseline is 15,972 million people-ppb. In FY 2005, the Mobile6 inventory is used as the baseline year for mobile source emissions. The 2000 baseline was 7.7M tons for mobile source VOC emissions, and 11.8M tons for mobile source NOx emissions. In FY 2005, the 2000 Mobile6 inventory is used as the baseline for mobile source emission. The 2000 baseline was 79.2M tons for mobile source CO emissions. While on-road CO emissions continue to decrease, there is an overall increase in mobile source CO emissions due to a growth in nonroad CO.

Reduce Exposure to Unhealthy PM Levels - PM- 2.5

In 2009 *Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.*

In 2008 *Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.*

In 2007 *The number of people living in areas with monitored ambient PM concentrations below the NAAQS for the PM-2.5 standard.*

In 2006 *The number of people living in areas with monitored ambient PM concentrations below the NAAQS for the PM-2.5 standard will increase by 1% (relative to 2005) for a cumulative total of less than 1% (relative to 2001).*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.	2	7	3	Data Avail 2008	4	5	Percentage
Tons of PM-2.5 Reduced since 2000 from Mobile Sources	73,460	73,460	85,704	Data Avail 2008	97,947	110,890	Tons

Background: The PM 2.5 concentration reduction annual measure reflects improvements (reductions) in the ambient concentration of fine particulate matter PM2.5 pollution across all monitored counties, weighted by the populations in those areas. To calculate this weighting, pollutant concentrations in monitored counties are multiplied by the associated county populations. Therefore, the units for this measure are "million people micrograms per meter cubed: (million people ug/mg3. The 2003 baseline is 2.581 baseline is 2,581 million people-ug/mg3. In FY 2005, the 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for PM 2.5 from mobile sources is 613,000 tons.

Acid Rain

In 2009 *Keep annual emissions below level authorized by allowance holdings and make progress towards achieving the year 2010 SO2 emissions cap for utilities. Annual emissions reduction target is 7.5million tons from the 1980 baseline.*

In 2009 *Reduce total annual average nitrogen deposition and total ambient nitrate concentrations 10% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

In 2009 *Reduce total annual average sulfur deposition and total ambient sulfate concentrations 10% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

In 2008 *Keep annual emissions below level authorized by allowance holdings and make progress towards achieving the year 2010 SO2 emissions cap for utilities. Annual emissions reduction target is 7.5million tons from the 1980 baseline.*

In 2008 *Reduce total annual average nitrogen deposition and total ambient nitrate concentrations 10% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2008 *Reduce total annual average sulfur deposition and ambient sulfate concentrations 29% from baseline.*

In 2007 *Reduce total annual average nitrogen deposition and total ambient nitrate concentrations 10% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

In 2007 *Reduce total annual average sulfur deposition and ambient sulfate concentrations 29% from baseline.*

In 2006 *Reduce total annual average nitrogen deposition and ambient nitrate concentrations 5% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

In 2006 *Reduce total annual average sulfur deposition and ambient sulfate concentrations 27% from baseline. Baseline for annual targets up through 2010 is 1990 monitored levels.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Tons of sulfur dioxide emissions from electric power generation sources	7,000,000	8,000,000	7,500,000	Data Avail 2008	8,000,000	8,000,000	Tons Reduced
Percent change in average nitrogen deposition and mean total ambient nitrate concentrations.	No Target Established	No Target Established	10	Data Avail 2009	No Target Established	No Target Established	Percentage
Percent change in average sulfur deposition and mean ambient sulfate concentrations.	No Target Established	No Target Established	29	Data Avail 2009	No Target Established	No Target Established	Percentage

Background: The baseline year is 1980. The 1980 SO2 emissions inventory totals 17.4 million tons for electric utility sources. This inventory was developed by National Acid Precipitation Assessment Program (NAPAP) and is 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, 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. Sulfur and nitrogen deposition contribute to acidification of lakes and streams, making them unable to support fish and other aquatic life. Reductions in sulfur and nitrogen deposition are critical to reducing the number of chronically acidic water bodies. Ambient sulfate and ambient nitrate ("acid rain" particulate") contribute to unhealthy air and respiratory problems in humans, especially children and other sensitive populations. The baseline is established from monitored site

levels based on consolidated map of 1989-1991 showing a three year of deposition levels produced from the CASTNET sites (http://www.epa.gov/castnet/sites.html).

Air Toxicity-Weighted

In 2009 *Cumulative reduction in tons of toxicity-weighted for non-cancer emissions of air toxics from 1993 baseline.*

In 2009 *Cumulative reduction in tons of toxicity-weighted for cancer emissions of air toxics from 1993 baseline.*

In 2008 *Cumulative reduction in tons of toxicity-weighted for non-cancer emissions of air toxics from 1993 baseline.*

In 2008 *Cumulative reduction in tons of toxicity-weighted for cancer emissions of air toxics from 1993 baseline.*

In 2007 *Reduction in tons of toxicity-weighted for cancer and non-cancer emissions of air toxics from 1993 baseline.*

In 2006 *Reduction in tons of toxicity-weighted for cancer and non-cancer emissions of air toxics from 1993 baseline.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	34	Data Avail 2009	35	Data Avail 2009	35	36	Percentage
Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	58	Data Avail 2009	58	Data Avail 2009	59	59	Percentage

Background: The toxicity-weighted emission inventory will also utilize the NEI for air toxics along with the Agency's compendium of cancer and noncancer health risk criteria to develop a risk metric that can be tabulated and tracked on an annual basis. the baseline is based on emission inventory data from 1990-1993. The baseline is in 1993. Air toxics emissions data are revised every three years to generate inventories for the National Emissions Inventory (NEI), which replaced the National Toxics Inventory (NTI). In intervening years between updates of the NEI, the model EMS-HAP (Emissions Modeling System for Hazardous Air Pollutants) is used to estimate and project annual emissions of air toxics. As new inventories are completed and improved inventory data is added, the baseline (or total tons of air toxics) is adjusted. The toxicity-weighted emission inventory will also utilize the NEI

for air toxics along with the Agency's compendium of cancer and noncancer health risk criteria to develop a risk metric that can be tabulated and tracked on an annual basis. the baseline is based on emission inventory data from 1990-1993. The 2002 NEI was completed in fall of 2006 so there is a 4yr. lag. 2005 NEI will be an improvement so we should have actuals in early 2009.

New Source Review

In 2009 *Percent of major NSR permits issued within one year of receiving a complete permit application.*

In 2008 *Percent of major NSR permits issued within one year of receiving a complete permit application.*

In 2007 *Percent of major NSR permits issued within one year of receiving a complete permit application.*

In 2006 *Percent of major NSR permits issued within one year of receiving a complete permit application.*

	FY 2006		FY 2007		FY 2008	FY 2009	
Performance Measures	Target	Actual	Target	Actual	Target	Target	Unit
Percent of major NSR permits issued within one year of receiving a complete permit application.	70	70	75	Data Avail 2008	78	78	Percentage

Background: The baseline for NSR permits issued within one year of receiving a complete permit application is 61% in 2004.

Title V

In 2009 *Percent of significant and new Title V operating permit revisions issued within 18 months of receiving a complete permit application.*

In 2008 *Percent of significant and new Title V operating permit revisions issued within 18 months of receiving a complete permit application.*

In 2007 *Percent of significant and new Title V operating permit revisions issued within 18 months of receiving a complete permit application.*

In 2006 *Percent of significant and new Title V operating permit revisions issued within 18 months of receiving a complete permit application.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	91	91	94	Data Avail 2008	97	100	Percentage
Percent of new Title V operating permits issued within 18 months of receiving a complete permit application.	83	83	87	Data Avail 2008	91	95	Percentage

Background: The 2004 baseline for significant title V operating permit revisions issued within 18 months of receiving a complete permit application is 100% and the baseline for new title V operating permits issued within 18 months of receiving a complete permit application is 95%.

OBJECTIVE: HEALTHIER INDOOR AIR

Through 2012, working with partners, reduce human health risks by reducing exposure to indoor air contaminants through the promotion of voluntary actions by the public.

Healthier Residential Indoor Air

In 2009 *Additional people will be living in homes with healthier indoor air.*

In 2008 *Additional people will be living in homes with healthier indoor air.*

In 2007 *Additional people will be living in homes with healthier indoor air.*

In 2006 *850,000 additional people will be living in homes with healthier indoor air.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of additional homes (new and existing) with radon reducing features	180,000	Data Avail 2008	190,000	Data Avail 2008	225,000	265,000	Homes
Number of people taking all essential actions to reduce	4,100,000	Data Avail	No Target		No Target	5,300,000	Number

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
exposure to indoor environmental asthma triggers.		2008	Established		Established		
Percent of public that is aware of the asthma program's media campaign.	>20	33	>20	Data Avail 2008	>20	>20	Percentage
Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	2000	3,582	2000	Data Avail 2008	2000	2000	Number

Background: This performance measure includes EPA radon, and asthma work. By 2008, number of people living in homes built (new or existing) with radon reducing features will be 225,000. The baseline for the performance measure was 1996 (107,000 homes). Annual Surveys are conducted by our partners to gather information such as types of houses built, lot sizes, foundation designs, types of lumber used, types of doors and windows used. End-of-year performance for the asthma program is a best professional estimate using all data sources (including annual measures on partner performance and advertising awareness outlined below). The survey provides statistically sound results every three years for one period of time. Also, the surveys gather information on the use of radon-resistant design features in new houses. Each year, the survey of building practices is typically mailed out to home builders. The survey responses are analyzed, with respect to State market areas and Census Division in the U.S., to assess the percentage and number of homes built each year that incorporate radon-reducing features. The data are also used to assess the percentage and number of homes built with radon-reducing features in high radon potential areas in the United States (high risk areas). Other analyses include radon-reducing features as a function of housing type, foundation type, and different techniques for radon-resistant new home construction.

Healthier Indoor Air in Schools

In 2009 *Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.*

In 2008 *Students, faculty and staff will experience improved indoor air quality in their schools.*

In 2007 *Students, faculty and staff will experience improved indoor air quality in their schools.*

In 2006 *630,000 students, faculty and staff will experience improved indoor air quality in their schools.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	1200	1200	1100	Data Avail 2008	1100	1000	Number

Background: The nation has approximately 118,000 (updated to include new construction)* schools. Each school has an average of 525 students, faculty, and staff for a total estimated population of 62,000,000. The IAQ "Tools for Schools" Guidance implementation began in 1997. Results from a 2002 IAQ practices in schools survey suggest that approximately 20-22% of U.S. schools report an adequate effective IAQ management plan that is in accordance with EPA guidelines.

OBJECTIVE: PROTECT THE OZONE LAYER

By 2030, through worldwide action, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery, and overexposure to ultraviolet radiation, particularly among susceptible subpopulations, such as children, will be reduced.

Restrict Domestic Consumption of Class II HCFCs

In 2009 *Remaining US consumption of class II HCFCs below 9,900 ODP-weighted metric tonnes (ODP MTs) .*

In 2008 *Remaining US consumption of class II HCFCs below 9,900 ODP-weighted metric tonnes (ODP MTs) .*

In 2007 *Remaining US consumption of class II HCFCs below 9,900 ODP-weighted metric tonnes (ODP MTs).*

In 2006 *Restrict domestic annual consumption of class II HCFCs below 9,906 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.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Remaining US Consumption of HCFCs in tons of Ozone Depleting Potential (ODP).	<9,900	Data Avail 2008	<9,900	Data Avail 2008	<9,900	<9,900	ODP MTs

Background: The base of comparison for assessing progress on the 2005 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.

OBJECTIVE: RADIATION

Through 2011, working with partners, minimize unnecessary releases of radiation and be prepared to minimize impacts to human health and the environment should unwanted releases occur.

Radiation

In 2009 Percentage of most populous US cities with a radiation air monitoring system, which will provide data to assist in protective action determinations.

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of most populous US cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations.	65	67	80	87	85	90	Percentage
Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations.	75	78	80	83	85	90	Percentage
Average time of availability of quality assured ambient radiation air monitoring data during an emergency.	1.9	1.9	1.3	1.3	1	.8	Days
Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	30	33	40	43	46	53	Percentage

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions.	7	7	20	21	35	50	Percentage

Background: The baseline is 55%.

OBJECTIVE: REDUCE GREENHOUSE GAS INTENSITY

By 2012, 160 million metric tons of carbon equivalent (MMTCE) of emissions will be reduced through EPA¿s voluntary climate protection programs.

Reduce Greenhouse Gas Emissions

In 2009 *Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the building, industrial, and transportation sectors.*

In 2008 *Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the building, industrial, and transportation sectors.*

In 2007 *Greenhouse gas emissions will be reduced from projected levels by approximately 96.2 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations.*

In 2006 *Greenhouse gas emissions will be reduced from projected levels by approximately 102 MMTCE per year through EPA partnerships with businesses, schools, state and local governments, and other organizations.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	26.5	31.10	29.4	Data Avail 2008	32.4	35.5	MMTCE

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	0.6	0.6	0.9	Data Avail 2008	1.5	2.6	MMTCE
Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	57.5	69.0	62.6	Data Avail 2008	67.7	72.9	MMCTE

Background: The baseline for evaluating program performance is a projection of U.S. greenhouse gas emissions in the absence of the U.S. climate change programs. The baseline was developed as part of an interagency evaluation of the U.S. climate change programs in 2002, which built on similar baseline forecasts developed in 1997 and 1993. Baseline data for carbon emissions related to energy use is based on data from the Energy Information Agency (EIA) and from EPA's Integrated Planning Model of the U.S. electric power sector. Baseline data for non-carbon dioxide (CO2) emissions, including nitrous oxide and other high global warming potential gases are maintained by EPA. Baseline information is discussed at length in the U.S. Climate Action Report 2002 (http://yosemite.epa.gov/oar/GlobalWarming.nsf/content/ResourceCenterPublicationsUSClimate ActionReport.html), which provides a discussion of differences in assumptions between the 1997 baseline and the 2002 update, including which portion of energy efficiency programs are included in the estimates. EPA develops the non-CO2 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.

OBJECTIVE: ENHANCE SCIENCE AND RESEARCH

Through 2012, provide sound science to support EPA's goal of clean air by conducting leading-edge research and developing a better understanding and characterization of human health and environmental outcomes.

Research

Clean Air Research

In 2009 *Increased use of clean air research program products.*

In 2008 *Increased use of clean air research program products*

In 2007 *Increased use of particulate matter research program products*

4-Year Performance Data
Annual Performance Goals and Measures

In 2006 *BY 2006, develop and report on new data on the effects of different PM sizes or components to improve understanding of the health risks associated with short-term exposure to PM in healthy and select susceptible populations so that, by 2010, OAR has improved assessments of health risks to develop PM standards that maximize protection of human health, as determined by independent expert review.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Integrated report on the health effects of different particle sizes or particle components in healthy and select susceptible subgroups. (Research)	*1*	*Report*					*Report*
Percentage of NAAQS program publications rated as highly cited papers (Research)			35.7	32.9	No Target Established	33.9	Percent
Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health. (Research)	10	10	30	No Target Established	50	70	Percent
Percent planned actions accomplished toward the long-term goal of reducing uncertainty in the science that support standard setting and air quality management decisions. (Research)	100	94	100	100	100	100	Percent

Background: The program aims to make measurable progress in 1) assessing the linkage between health impacts and air pollutant sources and reducing the uncertainties that impede the understanding and usefulness of these linkages, and 2) reducing uncertainty in the science that supports standard setting and air quality management decisions. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); 2) the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research); and 3) the percentage of ORD-developed outputs appearing in the Office of Air and Radiation National Ambient Air Quality Standard Staff Paper (a measure of the utility and use of ORD's research). The program is also working toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health.

GOAL 2: CLEAN AND SAFE WATER

Ensure drinking water is safe. Restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.

OBJECTIVE: PROTECT HUMAN HEALTH

Protect human health by reducing exposure to contaminants in drinking water (including protecting source waters), in fish and shellfish, and in recreational waters.

Safe Drinking Water

In 2009 *Increase the population served by community water systems that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.*

In 2008 *90 % of the population served by community water systems that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.*

In 2007 *94% of the population will be served by community water systems in compliance with health-based drinking water standards.*

In 2006 *90% of the population served by community water systems in Indian country will receive drinking water that meets all applicable health-based drinking water standards.*

In 2006 *93% of the population served by community water systems will receive drinking water that meets all applicable health-based drinking water standards through effective treatment and source water protection.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of the population in Indian country served by community water systems that receive drinking water that meets all applicable health-based drinking water standards (4: Ambient Conditions)	*90*	*86.6*	*87*	*87*	*87*	*87*	*Percent Population*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection. (4: Ambient Conditions)	93	89.4	94	91.5	90	90	Percent Population
Fund utilization rate for the DWSRF. (1B: Service Delivery)	83.3	86.9	85	88	86	89	Rate
Number of additional projects initiating operations. (0: Indeterminate)	425	399	433	438	440	445	Projects
Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.) (1C: Fed/State/Tribal Gov. Activities)	95	94	95	92	95	95	Percent CWS
Percentage of identified Class V motor vehicle waste disposal wells closed or permitted. (1C: Fed/State/Tribal Gov. Activities)					90	75	Wells
Percentage of Class I, II, and III wells that maintain mechanical integrity without a failure that releases contaminants to underground sources of drinking water. (3: Pollution Reduction/Prevention)					98	98	Wells
Percentage of prohibited Class IV and high-priority, identified, potentially endangering Class V wells closed or permitted in ground-water based source water areas. (3: Pollution Reduction/Prevention)					96	86	Wells
Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection. (1C: Fed/State/Tribal Gov. Activities)	93.5	89.3	89	89	89.5	90	Percent Systems

GOAL 2: CLEAN AND SAFE WATER

(non-Program Assessment Rating Tool (PART) measures are italicized)

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards. (3: Pollution Reduction/Prevention)					95	95	Percent CWS

Background: 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. Year-to-year performance is expected to change as new standards take effect. Covered standards include: Stage 1 disinfection by-products/interim enhanced surface water treatment rule/long-term enhanced surface water treatment rule/arsenic.

River/Lake Assessments for Fish Consumption

In 2009 *Improve the quality of recreation waters.*

In 2008 *Improve the quality of recreation waters.*

In 2008 *Reduce public health risk and allow increased consumption of fish and shellfish.*

In 2007 *Coastal and Great Lakes beaches monitored by State beach safety programs will be open and safe for swimming in over 95% of the days of the beach season.*

In 2006 *Coastal and Great Lakes beaches monitored by State beach safety programs will be open and safe for swimming in over 94% of the days of the beach season.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of women of childbearing age having mercury levels in blood above the level of concern. (5: Exposure or Body Burden)					*5.5*	*5.2*	*Percent of Women*
Percent of state-monitored shellfish-growing acres impacted by anthropogenic sources that are approved or					*65-85*	*65-85*	*Percent Areas*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
conditionally approved for use. (4: Ambient Conditions)							
Number of waterborne disease outbreaks attributable to swimming in or other recreational contact with coastal and Great Lakes waters measured as a 5-year average. (5: Exposure or Body Burden)					*2*	*2*	*Outbreaks*
Percent of days of beach season that coastal and Great Lakes beaches monitored by State beach safety programs are open and safe for swimming. (4: Ambient Conditions)	*94*	*97*	*92.6*	*95.2*	*92.6*	*93*	*Percent Days/Season*

Background: For shellfish consumption, 77% of assessed estuary square miles met this designated use. For days of beach season monitoring, Guam, American Samoa, and the Northern Marianas were included for the first time in 2006. These territories have a higher percentage of beach season day closures resulting in a lower percentage of days at the regional and national levels.

OBJECTIVE: PROTECT WATER QUALITY

Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters.

Watershed Protection

In 2009 *Use pollution prevention and restoration approaches to protect the quality of rivers, lakes, and streams on a watershed basis.*

In 2008 *Use pollution prevention and restoration approaches to protect the quality of rivers, lakes, and streams on a watershed basis.*

In 2007 *Water quality standards are fully attained in over 25% of miles/acres of waters by 2012, with an interim milestone of restoring 8.0% of these waters - identified in 2000 as not attaining standards - by 2005.*

In 2006 *Water quality standards are fully attained in over 25% of miles/acres of waters by 2012, with an interim milestone of restoring 5% of these waters - identified in 2000 as not attaining standards - by 2005.*

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative). (4: Ambient Conditions)		924	1,166	1,409	1,550	1,660	Number of Segments
Fund utilization rate for the CWSRF. (1B: Service Delivery)	93.3	94.7	93.4	96.7	93.5	93.7	Percent Rate
Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards (4: Ambient Conditions)					86	86	Percent POTWs
Reduction in phosphorus loadings (millions of pounds). (3: Pollution Reduction/Prevention)	4.5	11.8	4.5	Data Avail Mid-2008	4.5	4.5	Lbs in Millions
Additional pounds (in millions) of reduction to total nitrogen loadings. (3: Pollution Reduction/Prevention)	8.5	14.50	8.5	Data Avail Mid-2008	8.5	8.5	Lbs in Millions
Additional tons of reduction to total sediment loadings. (3: Pollution Reduction/Prevention)	700,000	1,200,000	700,000	Data Avail Mid-2008	700,000	700,000	Tons
Number of TMDLs that are established by States and approved by EPA on schedule consistent with national policy (cumulative). (1B: Service Delivery)	15,428	17,682	20,232	21,685	28,527	31,587	TMDLs
Percentage of high priority state NPDES permits that are scheduled to be reissued. (1C: Fed/State/Tribal Gov. Activities)	95	96.4	95	112	95	95	Percent Permits
Percentage of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year. (3: Pollution Reduction/Prevention)	22.5	20.2	22.5	Data Avail 2008	22.5	22.5	Percent Dischargers
Percentage of submissions of new or revised water quality standards from States and Territories that are approved by	90.9	89.1	85	85.6	87	83	Percent Submissions

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
EPA. (1C: Fed/State/Tribal Gov. Activities)							
Number of TMDLs that are established or approved by EPA on a schedule consistent with national policy (cummulative). (1B: Service Delivery)	20,275	22,648	25,274	26,844	33,828	36,941	TMDLs
Percentage of waters assessed using statistically valid surveys. (1B: Service Delivery)	54	54	54	54	65	65	Percent Waters
Percent of high priority EPA and state NPDES permits that are reissued on schedule. (1C: Fed/State/Tribal Gov. Activities)	95	98.5	95	104	95	95	Percent Permits
% of States & Terr. that, within the preceding 3-yr. period, submitted new or revised wq criteria acceptable to EPA that reflect new scientific info from EPA or sources not considered in prev stnds. (1C: Fed/State/Tribal Gov. Activities)	66	66.1	67	66.1	68	68	Percent States/Terr.
Remove the specific causes of waterbody impairment identified by states in 2002 (cumulative). (3: Pollution Reduction/Prevention)						*5,075*	*Causes*
Improve water quality conditions in impaired watersheds nationwide using the watershed approach (cumulative). (3: Pollution Reduction/Prevention)						*64*	*Watersheds*

Background: As of 2002 state reports 453 watersheds had met the criteria that greater than 80% of assessed waters met all water quality standards. 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. In 2002, 0% of the 255,408 miles/and 6,803,419 acres of waters identified on 1998/2000 lists of impaired waters developed by States and approved by EPA under section 303(d) of the Clean Water Act.

4-Year Performance Data
Annual Performance Goals and Measures

Coastal and Ocean Waters

In 2009 *Improve National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally*

In 2008 *Improve National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally (1-5 scale.)*

In 2006 *Improve ratings reported on the national "good/fair/poor" scale of the National Coastal Condition Report for: coastal wetlands loss by at least 0.2 point; contamination of sediments in coastal waters by at least 0.7 point; benthic quality by at least 0.5 point; & eutrophic condition by at least 1.2 point*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan). (3: Pollution Reduction/Prevention)					*95*	*95*	*Percent Sites*

Background: National rating of "fair/poor" or 2.4 where the rating is based on a 5-point system where 1 is poor and 5 is good and is expressed as an aerially weighted mean of regional scores using the National Coastal Condition Report indicators [i.e., water clarity, dissolved oxygen, coastal wetlands loss, eutrophic conditions, sediment contamination, benthic health, and fish tissue contamination]. The 2002 National Coastal Condition Report indicated 4.3 for water clarity and 4.5 for dissolved oxygen, 1.4 for coastal wetlands loss; 1.3 for contamination of sediments in coastal waters; 1.4 for benthic quality; & 1.7 for eutrophic condition.

Alaska Native Villages

In 2009 Percent serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.

In 2008 Percent serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.

In 2007 Percent serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal. (3: Pollution Reduction/Prevention)			92	Data Avail Late 2008	94	96	Percent Homes

Background: In 2003, 77% of serviceable rural Alaska homes had access to drinking water supply and wastewater disposal.

OBJECTIVE: ENHANCE SCIENCE AND RESEARCH

By 2011, conduct leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in drinking water, fish and shellfish, and recreational waters and to support the protection of aquatic ecosystems-specifically, the quality of rivers, lakes, and streams, and coastal and ocean waters.

Research

Drinking Water Research

In 2009 *Increased use of drinking water research products.*

In 2008 *Increased use of drinking water research products*

In 2007 *Increased use of drinking water research products*

In 2006 *By 2006, provide results of full-scale treatment demonstration projects and evaluations of other approaches for managing arsenic in drinking water, so that by 2010, the Office of Water, states, local authorities and utilities have scientifically sound data and approaches to manage risks to human health posed by exposure to arsenic, as determined by independent expert review.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of Six Year Review decisions. (Research)	100	94	100	100	100	100	Percent

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of Contaminate Candidate List Decisions. (Research)	100	100	100	100	100	100	Percent

Background: The program aims to make measurable progress in 1) developing data, tools, and technologies to support scientifically sound Six Year Review decisions; and 2) developing data, tools, and technologies to support scientifically sound Contaminant Candidate List (CCL) decisions. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); and 2) the number of its papers actually used by EPA's Office of Water in Six Year Review and CCL decisions (a measure of the quality and use of ORD's research).

Water Quality Research

In 2009 *Increased use of water quality research products.*

In 2008 *Increased use of water quality research products*

In 2007 *Increased use of water quality research products*

In 2006 *By 2006, provide demonstrations of bioassessment methods for Mid-Western U.S. rivers, so that, by 2010, the Office of Water, states, and tribes have approaches and methods to develop and apply criteria for habitat alteration, nutrients, suspended and bedded sediments, pathogens, and toxic chemicals that will support designated uses for aquatic ecosystems, as determined by independent expert review.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs (in support of WQRP long-term goal #1) delivered (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs (in support of WQRP long-term goal #2) delivered (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs (in support of WQRP long-term goal #3) delivered (Research)	100	92	100	100	100	100	Percent

Background: The program aims to make measurable progress in 1) supporting water quality criteria development; 2) developing diagnostic tools that aid in establishing causal relationships between pollution and water quality impairments; and 3) providing information that supports sustainable watershed management practices through the demonstration of technologies, the application of decision tools and for forecasting restoration and benefits of management practices. Research under these three rubrics is designed to lead to the promulgation of protective standards, the identification of contaminant contributions to impaired waters, and the tools needed to restore and protect the nation's waters. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); and 2) the number of its papers deemed "highly cited" and of "high impact" in bibliometric analyses (a measure of the quality and use of ORD's research).

GOAL 3: LAND PRESERVATION AND RESTORATION

Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

OBJECTIVE: PRESERVE LAND

By 2011, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.

Municipal Solid Waste Source Reduction

In 2009	*Increase the number of tribes covered by an adequate and recently-approved integrated solid waste management plan, and close, clean up, or upgrade open dumps in Indian Country and on other tribal lands.*
In 2009	*Increase use of coal combustion ash rather than disposing of it.*
In 2008	*Divert 35% (87.3 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 2008	*Increase the number of tribes covered by an adequate and recently-approved integrated solid waste management plan, and close, clean up, or upgrade open dumps in Indian Country and on other tribal lands.*
In 2008	*Increase use of coal combustion ash rather than disposing of it.*
In 2007	*Divert 34.2% (85.2 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 2007	*Increase the number of tribes covered by an adequate and recently-approved integrated solid waste management plan, and close, clean up, or upgrade open dumps in Indian Country and on other tribal lands.*
In 2007	*Increase use of coal combustion ash rather and disposing of it.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2006 *Divert 33.4% (83.1 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 2006 *Divert 33.4% (83.1 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.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of coal combustion ash that is used instead of disposed. (3: Pollution Reduction/Prevention)			*1.8*	*Data Avail 2009*	*1.8*	*1.8*	*percent*
Daily per capita generation of municipal solid waste. (0: Indeterminate)	4.5	4.6	4.5	Data Avail 2009	4.5	4.5	lbs. MSW
Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands. (1C: Fed/State/Tribal Gov. Activities)			*30*	*107*	*30*	*27*	*open dumps*
Number of tribes covered by an integrated solid waste management plan. (1C: Fed/State/Tribal Gov. Activities)			*27*	*28*	*26*	*16*	*tribes*

Background: An analysis conducted at the end of FY 2006 shows approximately 4.6 lbs of MSW per person daily generation. For coal combustion ash, approximately 125 millions tons are generated annually, and in 2001, 32% was used rather than landfilled. The annual increase in use is targeted although associated increases in generation are also expected annually. There is a one-year data lag in reporting these data. With respect to the tribal data, targets are established relative to 2006 when new criteria for reporting were identified.

Waste and Petroleum Management Controls

In 2009 *Reduce releases to the environment by managing hazardous wastes and petroleum products properly.*

In 2008 *Reduce releases to the environment by managing hazardous wastes and petroleum products properly.*

In 2007 *Reduce releases to the environment by managing hazardous wastes and petroleum products properly.*

In 2006 *Reduce releases to the environment by managing hazardous wastes and petroleum products properly.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of hazardous waste facilities with new controls or updated controls. (2: Regulated Party Activities)						100	facilities
No more than 10,000 confirmed releases per year. (0: Indeterminate)	*<10,000*	*8,361*	*<10,000*	*7,570*	*<10,000*	*<10,000*	*UST releases*
Increase the rate of significant operational compliance by 1% over the previous year's target. (2: Regulated Party Activities)	*66*	*62*	*67*	*63*	*68*	*69*	*percent*

Background: Since FY 2004, states and regional offices have reported the percentage of UST facilities that are in significant operational compliance with both release detection and release prevention (spill, overfill, and corrosion protection) requirements, out of a total estimated universe of approximately 256,000 facilities. At the end of FY 2006, 62 percent of USTs were in significant operational compliance with both release detection and release prevention requirements. Given the inspection requirements of the Energy Policy Act of 2005, some states are now targeting previously un-inspected facilities, and these are more likely to be out-of-compliance. Between FY 1999 and FY 2006, confirmed UST releases averaged 10,534. By 2011, 500 RCRA hazardous waste facilities will have initial approved controls or upgraded controls. Although the universe of facilities requiring these controls will be reassessed in 2009, this number is currently estimated at 820.

OBJECTIVE: RESTORE LAND

By 2011, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.

Superfund Cost Recovery

In 2009 *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 2008 *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 2007 *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 2006 *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.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
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. (2: Regulated Party Activities)	*100*	*100*	*100*	*98*	*100*	*100*	*Percent*

Background: 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 2009 *Reach a settlement or take an enforcement action by the time of the Remedial Action start at 95 percent of non-Federal Superfund sites that have viable, liable parties.*

In 2008 *Reach a settlement or take an enforcement action by the time of the Remedial Action start at 95 percent of non-Federal Superfund sites that have viable, liable parties.*

In 2007 *Reach a settlement or take an enforcement action by the time of the Remedial Action start at 95 percent of non-Federal Superfund sites that have viable, liable parties.*

In 2006 *Reach a settlement or take an enforcement action by the time of the Remedial Action start at 90 percent of non-Federal Superfund sites that have viable, liable parties.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA. (2: Regulated Party Activities)	*90*	*100*	*95*	*98*	*95*	*95*	*Percent*

Background: In FY 98 approximately 70% of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties. In FY2003, a settlement was reached or an enforcement action was taken with non-Federal PRPs before the start of the remedial action at approximately 90 percent of Superfund sites.

Assess and Cleanup Contaminated Land

In 2009 *Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.*

In 2008 *Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.*

In 2007 *Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.*

In 2006 *Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of cleanups completed that meet state risk-based standards for human exposure and groundwater migration. (2: Regulated Party Activities)	13,600	14,493	13,000	13,862	13,000	13,000	cleanups
Number of cleanups completed that meet risk-based standards for human exposure and groundwater migration in Indian Country. (2: Regulated Party Activities)	30	43	30	54	30	30	cleanups

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Superfund final site assessment decisions completed. (2: Regulated Party Activities)	419	518	350	395	400	400	assessments
Annual number of Superfund sites with remedy construction completed. (0: Indeterminate)	40	40	24	24	30	35	completions
Number of Superfund sites with human exposures under control. (0: Indeterminate)	*10*	*34*	*10*	*13*	*10*	*10*	*sites*
Superfund sites with contaminated groundwater migration under control. (0: Indeterminate)	*10*	*21*	*10*	*19*	*15*	*15*	*sites*
Number of Federal Facility Superfund sites where all remedies have completed construction. (3: Pollution Reduction/Prevention)	51	55	56	59	60	64	sites
Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined. (3: Pollution Reduction/Prevention)	61	70	76	71	81	85	remedies
Number of RCRA facilities with final remedies constructed. (2: Regulated Party Activities)						100	facilities
Number of RCRA facilities with human exposures under control. (2: Regulated Party Activities)						60	facilities
Number of RCRA facilities with migration of contaminated groundwater under control. (2: Regulated Party Activities)						60	facilities
Number of Superfund sites ready for anticipated use site-wide. (4: Ambient Conditions)			*30*	*64*	*30*	*30*	*sites*

Background: Through the end of FY 2005, a total of 38,770 final assessment decisions had been made out of a universe of 44,700 potentially hazardous waste sites evaluated by EPA. Additionally, Superfund controlled human exposures at 1,266 of 1,543 eligible NPL sites and controlled groundwater migration at 937 of 1,381 eligible NPL sites, completed construction at 966 of 1,498 eligible NPL sites, and selected final remedies at 1,042 of 1,498 of the eligible NPL sites. Of the 1,714 RCRA Corrective Action highest-priority facilities, 96% (1,649) had human exposures controlled and 78% (1,342) had

groundwater migration controlled through the end of FY 2005, reflecting the strong EPA/state partnership in this program. The new measures for RCRA Corrective Action reflect a universe of 3,746 of the high National Corrective Action Prioritization System-ranked facilities, which was recently set. Through FY2006, EPA has completed more than 75% (or 350,818) leaking underground storage tank cleanups. The Agency has worked with state partners to evaluate multi-year cleanup goals in light of new pressures that have slowed the pace of cleanup in recent years. The result of this process has been a reduction of multi-year goals to a target number that better reflects the current challenges.

Prepare/Respond to Accidental/Intentional Release

In 2009 *Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.*

In 2008 *Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.*

In 2007 *Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.*

In 2006 *Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.*

	FY 2006		FY 2007		FY 2008	FY 2009	
Performance Measures	Target	Actual	Target	Actual	Target	Target	Unit
Superfund-lead removal actions completed annually. (2: Regulated Party Activities)	195	157	195	200	195	195	removals
Voluntary removal actions, overseen by EPA, completed. (2: Regulated Party Activities)	115	93	120	151	125	130	removals
Number of inspections and exercises conducted at oil storage facilities that are required to have Facility Response Plans. (1C: Fed/State/Tribal Gov. Activities)	*100*	*345*	*200*	*335*	*250*	*250*	*inspections/ exercises*
Percentage of inspected facilities subject to Spill Prevention, Control and Countermeasures (SPCC) regulations found to be in compliance. (2: Regulated Party Activities)	100	50	53	40	55	58	percent

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of inspected facilities subject to Facility Response Plan (FRP) regulations found to be in compliance. (2: Regulated Party Activities)	100	71	75	67	78	82	percent
Score in annual Core Emergency Response assessment. (1C: Fed/State/Tribal Gov. Activities)			*55*	*96*	*65*	*75*	*percent*

Background: Between 2000 and 2005 EPA completed an average 209 Superfund removal response actions and an average 97 removal actions were completed by responsible parties voluntarily (i.e., undertaken without EPA enforcement action). In FY 2004, the compliance rate of all facilities subject to FRP regulations (estimated number of facilities is 4,200) was 50% and the compliance rate of inspected facilities subject to SPCC regulations was approximately 75%. Beginning in FY 2007, EPA regional, HQ, and Special Teams scores were determined according to a set of readiness criteria to enhance and strengthen the core emergency response program.

OBJECTIVE: ENHANCE SCIENCE AND RESEARCH

Through 2011, provide and apply sound science for protecting and restoring land by conducting leading-edge research, which through collaboration, leads to preferred environmental outcomes

Research

Land Protection and Restoration Research

In 2009 *Increased use of land protection and restoration research products.*

In 2008 *Increased use of land protection and restoration research products*

In 2007 *Increased use of land protection and restoration research products*

In 2006 *Document the performance, including cost savings, of innovative characterization and remediation options, so that newer approaches with cost or performance advantages are applied for Superfund and other cleanup projects.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal. (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal. (Research)	100	96	100	100	100	100	Percent

Background: The program aims to make measurable progress in providing timely, cutting edge, problem-driven research products to support sound science decisions by EPA offices engaged in activities to preserve land quality and remediate contaminated land for beneficial reuse. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); and 2) the number of its papers deemed "highly cited" and of "high impact" in bibliometric analyses (a measure of the quality and use of ORD's research).

GOAL 4: HEALTHY COMMUNITIES AND ECOSYSTEMS

Protect, sustain, or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships.

OBJECTIVE: CHEMICAL AND PESTICIDE RISKS

By 2011, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.

Protect Human Health from Pesticide Risk

In 2009 *Protect human health by implementation our statutes and taking regulatory actions to ensure pesticides continue to be safe and available when used with the label.*

In 2008 *Decrease cost per pesticide occupational incident avoided.*

In 2008 *Ensure new pesticide registration actions (including new active ingredients, new uses) meet new health standards and are environmentally safe.*

In 2008 *Improve the health of those who work in or around pesticides by reaching a 50% reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.*

In 2008 *Percentage of acre treatments that will use applications of reduced-risk pesticides.*

In 2008 *Protect those occupationally exposed to pesticides by improving or maintaining a rate of 3.5 or less incidents per 100,000 potential risk events.*

In 2008 *Reduce concentration of pesticides detected in general population.*

In 2008 *Reduce decision times for registration of reduced risk chemicals.*

In 2008 *Register reduced risk pesticides, including biopesticides.*

In 2007 *Decrease cost per pesticide occupational incident avoided.*

In 2007 *Ensure new pesticide registration actions (including new active ingredients, new uses) meet new health standards and are environmentally safe.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2007 *Improve the health of those who work in or around pesticides by reducing moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.*

In 2007 *Percentage of acre treatments that will use applications of reduced-risk pesticides.*

In 2007 *Reduce concentration of pesticides detected in general population.*

In 2007 *Reduce decision times for registration of reduced risk chemicals.*

In 2007 *Register reduced risk pesticides, including biopesticides.*

In 2006 *Ensure new pesticide registration actions (including new active ingredients, new uses) meet new health standards and are environmentally safe.*

In 2006 *Percentage of acre treatments that will use applications of reduced-risk pesticides*

In 2006 *Reduce decision times for registration of reduced risk chemicals.*

In 2006 *Register reduced risk pesticides, including biopesticides.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Register reduced risk pesticides, including biopesticides. (1C: Fed/State/Tribal Gov. Activities)	*14*	*15*	*14*	*14*	*10*	*11*	*Registrations*
New Chemicals (Active Ingredients) (1C: Fed/State/Tribal Gov. Activities)	*8*	*19*	*8*	*16*	*12*	*12*	*Registrations*
New Uses (1C: Fed/State/Tribal Gov. Activities)	*200*	*235*	*200*	*233*	*250*	*200*	*Actions*
Percentage of agricultural acres treated with reduced-risk pesticides. (3: Pollution Reduction/Prevention)	17	18	18	Data Avail 2008	18.5	19	Percent Acre-Treatments
Incidents per 100,000 potential risk events in population occupationally exposed to pesticides. (6: Ultimate Ecological/Health Impacts)					<= 3.5/100,000	<= 3.5/100,000	Incidents/100,000

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent reduction in concentrations of pesticides detected in general population. (5: Exposure or Body Burden)			10	Data Avail 2008	No Target Established	30	Percent Cum. Reduction
Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate. (6: Ultimate Ecological/Health Impacts)					20	30	Percent Cum. Reduction

Background: There were 1,388 incidents out of 39,850,000 potential risk events for those occupationally exposed to pesticides in FY 2003. According to NHANES data for FY 1999-2002 the concentration of pesticides residues detected in blood samples from the general population are: Dimethylphosphaste = 0.41 ug/L; Dimethylthiophosphate = 1.06 ug/L; Dimethyldithiophosphate = 0.07 ug/L; Diethylphosphate = 0.78 ug/L; Diethylthiophosphate = 0.5 ug/L; Diethyldithiophosphate = 0.07 ug/L; and
3,5,6-Trichloro-2-pyridinol = 1.9 ug/L. The rates for moderate to severe incidents for exposure to agricultural pesticides with the highest incident rates base on FY 1999 - 2003 data were: Chlorpyrifos, 67 incidents; diazinon, 51 incidents; malathion, 36 incidents; pyrethrins, 29 incidents; 2, 4-D, 27 incidents; carbofuran, 24 incidents, based on data from Poison Control Centers' Toxic Exposure Surveillance System (TESS), and NIOSH's Sentinel Event Notification System for Occupational Risk (SENSOR). The baseline for acres-treated is 3.6% of total acreage in 1998, when the reduced-risk pesticide acre treatments was 30,332,499 and total (all pesticides) was 843,063,644 acre-treatments. Zero reduced risk pesticides (including biopesticides) are registered in FY 1996; Cumulative total in FY 2007 is 200 registrations. Zero new chemicals (active ingredients) is registered in FY 1996; Cumulative total in FY 2007 is 117 new chemicals (AI). Zero new use actions in FY 1996; Cumulative total in FY 2007 is 3,774 new use actions.

Protect the Environment from Pesticide Risk

In 2009 *Protect the environment by implementing our statutes and taking regulatory actions to ensure pesticides continue to be safe and available when used with the label.*

In 2008 *Ensure that through ongoing data reviews, pesticide active ingredients, and products that contain them are reviewed to assure adequate protection for human health and the environment, taking into consideration exposure scenarios such as subsistance lifestyles of the Native Americans*

In 2008 *Reduce the average cost and average time to produce or update an Endangered Species Bulletin.*

In 2008 *Reduce the percent of urban watersheds sampled that exceeds EPA aquatic life benchmarks for three key pesticides of concern (diazinon, chlorpyrifos, malathion).*

4-Year Performance Data
Annual Performance Goals and Measures

In 2007 *Ensure that through ongoing data reviews, pesticide active ingredients, and products that contain them are reviewed to assure adequate protection for human health and the environment, taking into consideration exposure scenarios such as subsistance lifestyles of the Native Americans*

In 2007 *Reduce the average cost and average time to produce or update an Endangered Species Bulletin.*

In 2006 *Ensure that through ongoing data reviews, pesticide active ingredients, and products that contain them are reviewed to assure adequate protection for human health and the environment, taking into consideration exposure scenarios such as subsistance lifestyles of the Native Americans*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Product Reregistration (1C: Fed/State/Tribal Gov. Activities)	*545*	*545*	*545*	*962*	*1075*	*2000*	*Actions*
Percent of urban watersheds that exceeds EPA aquatic life benchmarks for three key pesticides of concern. (4: Ambient Conditions)					25, 25, 30	20, 20, 25	Percent Reduction

Background: The 1992-2001 baselines as a percentage of urban watersheds sampled that exceeded benchmarks are: diazinon, 40 percent; chlorpyrifos, 37 percent; and malathion, 30 percent. Zero product reregistraion in 200X; A total of 8,320 product reregistrations were completed in 2007.

Endocrine Disruptors

In 2009 *Endocrine Disruptor Screening Program will continue its progress toward completing the validation of endocrine test methods.*

In 2008 *Endocrine Disruptor Screening Program will continue its progress toward completing the validation of endocrine test methods.*

In 2007 *Endocrine Disruptor Screening Program will continue its progress toward completing the validation of endocrine test methods.*

In 2006 *Endocrine Disruptor Screening Program will continue its progress toward completing the validation of endocrine test methods.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Cumulative number of assays that have been validated. (Research)	11/20	2/21	8/20	3/20	13/20	14/19	Assays

Background: Zero assays were validated in FY 2005.

Realize the Value from Pesticide Availability

In 2009 *Ensure the public health and socio-economic benefits of pesticide availability and use are achieved.*

In 2008 *Annually avoid $900M in termite structural damage by ensuring safe and effective pesticides are registered/reregistered and available for termite treatment.*

In 2008 *Avoid $1.5 billion of crop loss by ensuring that effective pesticides are available to address pest infestations.*

In 2008 *Maintain timeliness of S18 decisions.*

In 2008 *Number of acres using reduced risk pest management practices compared to the grant and/or contract funds expended on environmental stewardship.*

In 2007 *Maintain timeliness of S18 decisions.*

In 2006 *Maintain timeliness of S18 decisions.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Maintain timeliness of S18 decisions (1C: Fed/State/Tribal Gov. Activities)	*45*	*48*	*45*	*36.6*	*45*	*45*	*Days*
Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/re-registered and available for termite treatment. (3: Pollution Reduction/Prevention)					900 M	900 M	Dollars/loss avoided

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations. (3: Pollution Reduction/Prevention)					1.5 B	1.5 B	Dollars/loss avoided

Background: Based on U.S Census housing data, industry data, and academic studies on damage valuation, EPA calculates that in FY 2003 there were $900 million in annual savings from structural damage avoided due to availability of registered termiticides. According to EPA and USDA data for the years FY 2000-2005, emergency exemptions issued by EPA resulted in $1.5 billion in avoided crop loss. Baseline for S18 decisions is 45 days in 2005

Lead Gasoline Phase-Out

In 2009 *Eliminate use of lead in gasoline in remaining countries that still use lead as an additive, affecting more than 700 million people.*

In 2009 *Increase access to low-sulfur fuels in developing countries.*

In 2008 *Eliminate use of lead in gasoline in remaining countries that still use lead as an additive, affecting more than 700 million people.*

In 2008 *Increase access to low-sulfur fuels in developing countries.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of countries completing phase out of leaded gasoline. (incremental) (2: Regulated Party Activities)					*7*	*4*	*Countries*
Number of countries introducing low sulfur in fuels. (incremental) (2: Regulated Party Activities)					*2*	*3*	*Countries*

Background: As of June 2005, 122 countries have phased out the use of lead in gasoline. As of 2005, United States, Japan, Canada, and the European Community have introduced low-sulfur fuels.

Lead-Based Paint Risk Reduction Program

In 2009 *Reduce exposure to and health effects from lead.*

In 2008 *Reduce exposure to and health effects from priority industrial/commercial chemicals*

In 2007 *Reduce exposure to and health effects from priority industrial/commercial chemicals*

In 2006 *Reduce exposure to and health effects from priority industrial/commercial chemicals*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old. (5: Exposure or Body Burden)	29	Data Lag	No Target Established	No Target Established	29	No Target Established	Percent
Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl). (5: Exposure or Body Burden)	216,000	Data Lag	No Target Established	No Target Established	90,000	No Target Established	Children

Background: Data released by CDC from the National Health and Nutritional Evaluation Survey (NHANES) in May of 2005 estimated a population of 310,000 children aged 1 - 5 with lead poisoning (blood lead levels of 10 ug/dl or greater). Baseline for percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old is 37% in 1991-1994.

Chemical Risk Review and Reduction

In 2009 *Identify, restrict, and reduce risks associated with industrial/commercial chemicals.*

In 2008 *Identify, restrict, and reduce risks associated with industrial/commercial chemicals.*

In 2007 *Identify, restrict, and reduce risks associated with industrial/commercial chemicals.*

In 2006 *Identify, restrict, and reduce risks associated with industrial/commercial chemicals.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL) (1C: Fed/State/Tribal Gov. Activities)	24	23	24	33	24	18	Chemicals
Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment. (3: Pollution Reduction/Prevention)	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*
Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities. (6: Ultimate Ecological/Health Impacts)	4.5	Data Lag	4.0	Data Lag	3.5	3.2	Percent RSEI Rel risk
Cumulative number of High Production Volume (HPV) chemicals with Risk Based Decisions Completed. (3: Pollution Reduction/Prevention)					150	490	HPV Chemicals
Cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization Reports completed. (3: Pollution Reduction/Prevention)			889	931	1260	1585	HPV Chemicals
Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities. (3: Pollution Reduction/Prevention)	3	Data Lag	2.6	Data Avail 2009	2.5	2.4	Percent Reduction

Background: The baseline for percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment was developed from a 2 year analysis from 2004-2005 comparing 8(e) reports to New Chemical submissions and is 100%. The baseline for the number of proposed AEGL values was developed for 2002 because after September 11, 2001, EPA received a substantial increase in funding for this activity. EPA developed Proposed AEGL values for 78 chemicals through 2002. In 2007, a total of 218 chemicals with proposed AEGL Values were reported for the AEGL Program (cumulative count). Baseline for the Risk Screening Environmental Indicators Model Program in 2001 was zero percent. 2001 was selected as the baseline year because of changing TRI reporting thresholds for persistent, bioaccumulative, toxic chemicals that took

effect in 2001. These changes significantly affect the RSEI model, making comparisons with years prior to 2001 inappropriate. A consistent set of chemicals can be used from 2001 forward. Cumulative reduction reported through 2005 is 29.3%. The baseline for the number of chemicals with Screening Level Hazard Characterization Reports was developed using data from internationally sponsored HPV chemicals through 2006. EPA assisted with the development and finalization of reports for these 630 chemicals. The cumulative count of HPV chemicals with reports completed through FY 2007 is 931. The baseline for the percent reduction in the risk based score for HPV chemicals is zero percent in 1998, which was the year the HPV program began. A cumulative 30.3% reduction has been observed between 1998 and 2005. The baseline for the number of HPV chemicals with risk based decisions completed in 2007 is zero.

Chemical Facility Risk Reduction

In 2009 *Protect human health, communities, and ecosystems from chemical risks and releases through facility risk reduction efforts and building community infrastructures.*

In 2008 *Protect human health, communities, and ecosystems from chemical risks and releases through facility risk reduction efforts and building community infrastructures.*

In 2007 *Protect human health, communities, and ecosystems from chemical risks and releases through facility risk reduction efforts and building community infrastructures.*

In 2006 *Protect human health, communities, and ecosystems from chemical risks and releases through facility risk reduction efforts and building community infrastructures.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of risk management plan audits and inspections completed. (1C: Fed/State/Tribal Gov. Activities)	*400*	*550*	*400*	*628*	*400*	*400*	*Audits*

Background: 3224 Risk Management Plan audits were completed between FY 2000 and FY 2006.

OBJECTIVE: COMMUNITIES

Sustain, clean up, and restore communities and the ecological systems that support them.

U.S.- Mexico Border Water/Wastwater Infrastructure

In 2009 *Sustain and restore the environmental health along the United States-Mexico Border through implementation of the "Border 2012" plan.*

In 2008 *Sustain and restore the environmental health along the United States-Mexico Border through implementation of the "Border 2012" plan.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003. (4: Ambient Conditions)					2,500	2,500	More Homes
Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003. (4: Ambient Conditions)					15,000	15,000	More Homes

Background: The US-Mexico border region extends more than 3,100 kilometers (2,000 miles) from the Gulf of Mexico to the Pacific Ocean, and 62.5 miles on each side of the international border. More than 11.8 million people reside along the border and this figure is expected to increase to 19.4 million by 2020. Ninety percent of the population reside in the 14 impaired, interdependent sister cities. Rapid population growth in urban areas has resulted in unplanned development, greater demand for land and energy, increased traffic congestion, increased waste generation, overburdened or unavailable waste treatment and disposal facilities, and more frequent chemical emergencies. Rural areas suffer from exposure to airborne dust, pesticide use, and inadequate water supply and treatment facilities. EPA, other US Federal agencies, and the Government of Mexico have partnered to address these environmental problems.

4-Year Performance Data
Annual Performance Goals and Measures

Environmental Justice

In 2009 *In FY 08, four communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies.*

In 2008 *In FY 08, four communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Communities with Environmental Justice Concerns (3: Pollution Reduction/Prevention)					*4*	*4*	*Communities*

Background: 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.

Revitalize Properties

In 2009 *Assess, clean up and promote the reuse of Brownfields properties, and leverage jobs and cleanup/redevelopment funding.*

In 2008 *Assess, clean up and promote the reuse of Brownfields properties, and leverage jobs and cleanup/redevelopment funding.*

In 2007 *Assess, clean up and promote the reuse of Brownfields properties, and leverage jobs and cleanup/redevelopment funding.*

In 2006 *Assess, clean up and promote the reuse of Brownfields properties, and leverage jobs and cleanup/redevelopment funding.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Brownfield properties assessed. (2: Regulated Party Activities)	1,000	2,139	1,000	Data Avail 2008	1,000	1000	Properties

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of properties cleaned up using Brownfields funding. (2: Regulated Party Activities)	*60*	*88*	*60*	*Data Avail 2008*	*60*	*60*	*Properties*
Acres of Brownfields properties made ready for reuse. (2: Regulated Party Activities)					225	225	Acres
Jobs leveraged from Brownfields activities. (0: Indeterminate)	*5,000*	*5,504*	*5,000*	*Data Avail 2008*	*5,000*	*5000*	*Jobs*
Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites. (2: Regulated Party Activities)	1	1.4	0.9	Data Avail 2008	0.9	0.9	Billions of Dollars

Background: By the end of FY 2005, the Brownfields program assessed 1,381 properties, cleaned up 93 properties, leveraged 6,128 jobs, and leveraged $1.0B in cleanup and redevelopment funding.

Pacific Island Territories

In 2009 *Sustain and restore the environmental health of the U.S. Pacific Island Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI).*

In 2008 *Sustain and restore the environmental health of the U.S. Pacific Island Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI).*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of population in each of U.S. Pacific Island Territories served by CWS will receive drinking water that meets all applicable health-based drinking water standards throughout the year. (3: Pollution Reduction/Prevention)					*72*	*72*	*Percent Population*
Percent of the time that the sewage treatment plants in the U.S. Pacific Island Territories will comply with permit					*67*	*64*	*Percent of Time*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
limits for biochemical oxygen demand (BOD) and total suspended solids (TSS). (3: Pollution Reduction/Prevention)							
Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming. (3: Pollution Reduction/Prevention)					*70*	*86*	*Percent Days*

Background: In 2005, 95% of the population in American Samoa, 10% in the Commonwealth of the Northern Mariana Islands (CNMI) and 80% of Guam served by CWS received drinking water that meets all applicable health-based standards. The sewage treatment plants in the Pacific Island Territories compiled 59% of the time with BOD & TSS permit limits. Beaches were open and safe 64% of the beach season in American Samoa, 97% in the CNMI & 76% in Guam.

OBJECTIVE: RESTORE AND PROTECT CRITICAL ECOSYSTEMS

Protect, sustain, and restore the health of critical natural habitats and ecosystems.

Protecting and Enhancing Estuaries

In 2009 *Working with partners, protect or restore additional (i.e., measuring from 2008 forward) acres of habitat within the study area for the 28 estuaries that are part of the National Estuary Program.*

In 2008 *Working with partners, protect or restore additional (i.e., measuring from 2008 forward) acres of habitat within the study area for the 28 estuaries that are part of the National Estuary Program.*

In 2007 *Working with NEP partners, protect or restore an additional 25,000 acres of habitat within the study areas for the 28 estuaries that are part of the National Estuary Program (NEP).*

In 2006 *Working with NEP partners, protect or restore an additional 25,000 acres of habitat within the study areas for the 28 estuaries that are part of the National Estuary Program (NEP).*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Acres protected or restored in NEP study areas. (4: Ambient Conditions)	25,000	140,033	50,000	102,462	50,000	75,000	Acres

Background: 2005 Baseline: 449,242 acres of habitat protected or restored; cumulative from 2002.

Gulf of Mexico

In 2009 *Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.*

In 2008 *Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.*

In 2007 *Prevent water pollution and protect aquatic species in order to improve the health of the Gulf of Mexico.*

In 2006 *Prevent water pollution and protect aquatic species in order to improve the health of the Gulf of Mexico.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report. (4: Ambient Conditions)	*2.4*	*2.4*	*2.4*	*2.4*	*2.5*	*2.5*	*Scale*
Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas (cumulative starting in FY 07). (6: Ultimate Ecological/Health Impacts)					*64*	*96*	*Impaired Segments*
Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats. (6: Ultimate Ecological/Health Impacts)					*18,200*	*20,600*	*Acres*

4-Year Performance Data
Annual Performance Goals and Measures

Background: In 2004, the Gulf of Mexico rating of fair/poor was 2.4 where the rating is based on a 5-point system in which 1 is poor and 5 is good and is expressed as an aerially weighted mean of regional scores using the National Coastal Condition Report II indicators: water quality index, sediment quality index, benthic index, coastal habitat index, and fish tissue contaminants.

The hypoxia running average size for 1996-2000 = 14,128 km2. The 2002-2006 running average size = 14,944 km2. No annual targets are set for 2007 and 2008 because hypoxia varies annually, depending on the timing and extent of spring and summer stratification, weather patterns, temperature, and precipitation in the Gulf and drainage basin.

In 2002, 812 impaired segments identified in Section 303(d) listings. In 2005, 16,000 acres restored, enhanced, or protected; Gulf of Mexico coastal wetlands habitats include 3,769,370 acres.

Great Lakes Implementation Actions

In 2009 *Prevent water pollution and protect aquatic systems so that overall ecosystem health of the Great Lakes is improved.*

In 2008 *Prevent water pollution and protect aquatic systems so that overall ecosystem health of the Great Lakes is improved.*

In 2007 *Prevent water pollution and protect aquatic systems so that overall ecosystem health of the Great Lakes is improved.*

In 2006 *Prevent water pollution and protect aquatic systems so that overall ecosystem health of the Great Lakes is improved.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems. (4: Ambient Conditions)	*21*	*21.1*	*21*	*22.7*	*22*	*No Target Established*	*Scale*
Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes. (3: Pollution Reduction/Prevention)	4.5	4.1	4.5	4.5	5.5	5.5	Million Cubic Yards
Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples. (5: Exposure or Body Burden)	5	6	5	6	5	5	Percent Annual Decrease
Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes Basin. (4: Ambient Conditions)	7	8	7	8	7	7	Percent Annual Decrease

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of Areas of Concern in the Great Lakes Basin which are restored and de-listed. (1C: Fed/State/Tribal Gov. Activities)	*2*	*1*	*1*	*1*	*3*	*No Target Established*	*Cum. Areas of Concern*
Number of Beneficial Use Impairments removed within Areas of Concern. (3: Pollution Reduction/Prevention)			No Target Established	9	16	21	Cum. Number of BUI Removed

Background: Great Lakes rating of 20.9 reported in 2003, based on most current data available, generally from 2001) on a 40 point scale where the rating uses select Great Lakes State of the Lakes Ecosystem indicators based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good. (ii) 2.1 million cubic yards of contaminated sediments were remediated from 1997 through 2001 of the 40 million requiring remediation. (iii) On average, total PCB concentrations in whole Great Lakes top predator fish have recently declined 5 percent annually - average concentrations at Lake sites from 2002 were: L Superior-9ug/g; L Michigan- 1.6ug/g; L Huron- .8ug/g L Erie- 1.8ug/g; and L Ontario- 1.2ug/g. 9iv) Average concentrations of toxic chemicals in the air (PCBs) from 2002 were; L Superior- 60 pg/m2; L Michigan- 87 pg/m2; L Huron-19 pg/m2; L Erie- 183 pg/m2; and L Ontario- 36 pg/m2. (v) In 2002, no Areas of Concern had been delisted.

Wetland and River Corridor Projects

In 2009 *Working with partners, achieve a net increase in wetlands acres with additional focus on assessment of wetland condition.*

In 2008 *Working with partners, achieve a net increase in wetlands acres with additional focus on assessment of wetland condition.*

In 2007 *Working with partners, achieve no net loss of wetlands.*

In 2006 *Working with partners, achieve no net loss of wetlands.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
In partnership with the U.S. Army Corps of Engineers, states, and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory	*No Net Loss*	*N/A*	*No Net Loss*	*Data Lag*	*No Net Loss*	*No Net Loss*	*Acres*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
program (4: Ambient Conditions)							
Working with partners, achieve a net increase of acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland conditions. (cumulative) (4: Ambient Conditions)	*200,000*	*N/A*	*100,000*	*Data Lag*	*100,000*	*100,000*	*Acres/year*

Background: Annual net wetland loss of an estimated 58,500 acres as measured by the U.S. Fish and Wildlife Service and reported in Status and Tends of Wetlands in the Conterminous United States, 1986-1997. The United States achieved a net cumulative increase of 32,000 acres per year of wetlands over a 6-year period, from 1998 through 2004, as measured by the U.S. Fish and Wildlife Service and reported in Status and trends of Wetlands in the Conterminous United States, 1998 to 2004. (Dahl, T.E. 2006. Status and Trends of Wetlands in the Conterminous United States, 1998 to 2004. U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 112 pp.)

Chesapeake Bay Habitat

In 2009 *Prevent water pollution and protect aquatic systems so that the overall aquatic system health of the Chesapeake Bay is improved.*

In 2008 *Prevent water pollution and protect aquatic systems so that the overall aquatic system health of the Chesapeake Bay is improved.*

In 2007 *Prevent water pollution and protect aquatic systems so that overall aquatic system health of the Chesapeake Bay is improved enough so that there are 100,000 acres of submerged aquatic vegetation. (cumulative)*

In 2007 *Reduce nitrogen loads by 80 million pounds per year; phosphorus loads by 9.0 million pounds per year, and sediment loads by 1.16 million tons per year from entering the Chesapeake Bay, from 1985 levels.*

In 2006 *Prevent water pollution and protect aquatic systems so that overall aquatic system health of the Chesapeake Bay is improved enough so that there are 100,000 acres of submerged aquatic vegetation. (cumulative)*

In 2006 *Reduce nitrogen loads by 80 million pounds per year; phosphorus loads by 9.0 million pounds per year, and sediment loads by 1.16 million tons per year from entering the Chesapeake Bay, from 1985 levels*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Reduction, from 1985 levels, of nitrogen (M/lbs), phosphorus (M/lbs), and sediment loads (tons) entering Chesapeake Bay. (cumulative) (3: Pollution Reduction/Prevention)	*74/8.7/1.1*	*72.3/8.7/1.*	*80/9.0/1.16*				*Percent*
Percent of point source nitrogen reduction goal of 49.9 million pounds achieved. (3: Pollution Reduction/Prevention)	65	68	70	69	74	79	Percent Goal Achieved
Percent of point source phosphorus reduction goal of 6.16 million pounds achieved. (3: Pollution Reduction/Prevention)	82	84	84	87	85	87	Percent Goal Achieved
Percent of forest buffer planting goal of 10,000 miles achieved. (3: Pollution Reduction/Prevention)	46	46	53	53	60	68	Percent Goal Achieved
Acres of submerged aquatic vegetation (SAV) present in the Chesapeake Bay. (cumulative) (4: Ambient Conditions)	*90,000*	*78,259*	*90,000*	*59,090*			*Acres*
Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.5 million pounds). (3: Pollution Reduction/Prevention)	44	44	47	46	50	53	Percent Goal Achieved
Percent of goal achieved for implementation of phosphorus reduction practices (expressed as progress meeting the phosphorus reduction goal of 14.36 million pounds). (3: Pollution Reduction/Prevention)	61	61	64	62	66	69	Percent Goal Achieved
Percent of goal achieved for implementation of sediment reduction practices (expressed as progress meeting the sediment reduction goal of 1.69 million pounds). (3: Pollution Reduction/Prevention)	57	57	61	62	64	67	Percent Goal Achieved

4-Year Performance Data
Annual Performance Goals and Measures

Background: In 1984, there were 38,230 acres of submerged aquatic vegetation in the Chesapeake Bay. In 2002, baseline for nitrogen load reductions was 53 million pounds per year; phosphorus load reductions was 8.0 million pounds per year; and sediment load reductions was 0.8 million tons per year. *Fiscal year data in this table reflects prior calendar year performance data.

In 2006, there were 32.68 million lbs of point source nitrogen reduced, 65% towards the goal. There were 5.07 million lbs of point source phosphorus reduced, 82% towards the goal. Four thousand six hundred six miles of forest buffer were planted, 46% towards the goal.

Long Island Sound

In 2009 *Prevent water pollution, improve water quality, protect aquatic systems, and restore the habitat of Long Island Sound by working through the Long Island Sound Management Study Conference Partnership.*

In 2008 *Prevent water pollution, improve water quality, protect aquatic systems, and restore the habitat of Long Island Sound by working through the Long Island Sound Management Study Conference Partnership.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Reduce point source nitrogen discharges to Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL). (3: Pollution Reduction/Prevention)					*37,323*	*34,898*	*Pounds per Day*
Restore or protect acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands. (3: Pollution Reduction/Prevention)					*862*	*912*	*Acres*
Reopen miles of river and stream corridor to anadromous fish passage through removal of dams and barriers or installation of by-pass structures such as fishways. (1C: Fed/State/Tribal Gov. Activities)					*105.9*	*114*	*Miles*

Background: In 2000, TMDL baseline is 213,151 pounds/day. In 2005, 562 acres restored (cumulative) and 150 acres protected (cumulative). Eighty-one miles of river and stream corridor re-opened.

4-Year Performance Data
Annual Performance Goals and Measures

South Florida Ecosystem

In 2009 *Protect and maintain the South Florida Ecosystem, including the Everglades and coral reef ecosystems.*

In 2008 *Protect and maintain the South Florida Ecosystem, including the Everglades and coral reef ecosystems.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Achieve "no net loss" of stony coral cover in FL Keys Nat'l Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, FL working with all stakeholders. (1C: Fed/State/Tribal Gov. Activities)					*6.7/5.9*	*No Net Loss*	*Mean Percent of Area*
Annually maintain the overall health and functionality of sea grass beds in the Florida Keys Nat'l Marine Sanctuary (FKNMS) as measured by the long-term sea grass monitoring project. (3: Pollution Reduction/Prevention)						*Maintain*	*Sea Grass Health*
Maintain the overall water quality of the near shore and coastal waters of the Florida Keys Nat'l Marine Sanctuary (FKNMS). (4: Ambient Conditions)					*Maintain*	*Maintain*	*Water Quality*
Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 ppb total phosphorus criterion throughout the Everglades Protection Area marsh. (3: Pollution Reduction/Prevention)					*Maintain*	*Maintain*	*Parts per Billion*

Background: In 2005, the mean percent of stony coral cover is was 6.8% in FKNMS and 5.9% in Southeast Florida. Total water quality was at chl < 0.2 ug/l, light attenuation < 0.13/meter, DIN < 0.75 micromolar, and TP < 0.2 micromolar. Florida Keys seagrasses were at 8.28 for N:P of Thalassia and 0.48 for relative abundance of Thalassia. The average annual geometric mean phosphorus concentrations were 5 ppb in the Everglades National Park, 10 ppb in Water Conservation 3A, 13 ppb in the Loxahatchee National Wildlife Refuge, and 18 ppb in Water Conservation Area 2A; annual average flow-weighted from total phosphorus discharges from storm water treatment areas ranged from 13 ppb for area 3/4 and 98 ppb for area 1W. Effluent limits will be established for all discharges, including storm water treatment areas.

Puget Sound Basin

In 2009 *Improve water and air quality, and minimize the adverse impacts of rapid development in the Puget Sound Basin.*

In 2008 *Improve water and air quality, and minimize the adverse impacts of rapid development in the Puget Sound Basin.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degrading or declining water quality. (3: Pollution Reduction/Prevention)						*600*	*Acres*
Remediate acres of prioritized contaminated sediments. (3: Pollution Reduction/Prevention)						*125*	*Acres*
Restore the acres of tidally and seasonally influenced estuarine wetlands. (3: Pollution Reduction/Prevention)						*3,000*	*Acres*

Background: In 2006, 100 acres of shellfish-bed growing areas improved water quality and lifted harvest restrictions. Additionally, 750 acres of tidally- and seasonally-influenced estuarine wetlands were restored. In 2007, 120 acres of prioritized contaminated sediments were remediated.

Columbia River Basin

In 2009 *Prevent water pollution and improve and protect water quality and ecosystems in the Columbia River Basin to reduce risks to human health and the environment.*

In 2008 *Prevent water pollution and improve and protect water quality and ecosystems in the Columbia River Basin to reduce risks to human health and the environment.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed (cumulative starting FY 06). (3: Pollution Reduction/Prevention)					*3000*	*10,000*	*Acres*
Clean up acres of known contaminated sediments (cumulative starting FY 06). (1C: Fed/State/Tribal Gov. Activities)						*5*	*Acres*

Background: In 2005, 96,770 acres of wetland and upland habitat available for protection, enhancement, or restoration. In 2008, 3,000 additional acres are expected to be protected, enhanced, or restored. In FY 2009, 2,000 additional acres are expected to be protected, enhanced, or restored, towards a cumulative 10,000 acres.

OBJECTIVE: ENHANCE SCIENCE AND RESEARCH

Through 2011, identify and synthesize the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, communities, and ecosystems. Focus research on pesticides and chemical toxicology; global change; and comprehensive, cross-cutting studies of human, community, and ecosystem health.

Research

Research on Endocrine Disrupting Chemicals

In 2009 *Increased use of endocrine disruptors research program products.*

In 2008 *Increased use of endocrine disruptors research program products*

In 2007 *By 2007, develop improved protocols for screening and testing for the Agency's Endocrine Disruptors Screening Program and reduce scientific uncertainty on effects, exposure, and risk management issues*

4-Year Performance Data
Annual Performance Goals and Measures

In 2006 *By 2006, develop and transfer standardized protocols for screening chemicals for their potential effects on the endocrine system, so that EPA's Office of Prevention, Pesticides, and Toxic Substances has the necessary protocols to validate for use in the Agency's Endocrine Disruptors Screening Program, mandated by the Food Quality Protection Act, as determined by independent expert review.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Improved protocols for screening and testing (Research)	1	1	6	3	1	0	Reports
Effects and exposure milestones met (Research)	9	9	4	5	3	9	Reports
Assessment milestones met (Research)	1	0	0	0	0	0	Reports
Risk management milestones met (Research)	3	3	3	2	2	1	Reports

Background: The program aims to make measurable progress in 1) determining the extent of the impact of endocrine disruptors on humans, wildlife, and the environment to better inform the federal and scientific communities; and 2) reducing the uncertainty regarding the effects, exposure, assessment, and management of endocrine disruptors so that EPA has a sound scientific foundation for environmental decision-making. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to complete on time each year its 1) improved protocols for screening and testing; 2) effects and exposure milestones; 3) assessment milestones; and 4) risk management milestones.

Homeland Security Research

In 2009 *Enhance public health and safety and mitigate adverse effects of the purposeful introduction of hazardous chemical, biological, or radiological materials into the environment.*

In 2008 *Enhance public health and safety and mitigate adverse effects of the purposeful introduction of hazardous chemical, biological, or radiological materials into the environment.*

In 2007 *Enhance public health and safety and mitigate adverse effects of the purposeful introduction of hazardous chemical, biological, or radiological materials into the environment.*

In 2006 *Provide methods, guidance documents, technologies and tools to first responders and decision-makers to enhance safety and to mitigate adverse effects of the purposeful introduction of hazardous chemical or biological materials into the environment.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes. (Research)	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*
Percentage of planned outputs delivered in support of water security initiatives. (Research)	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*
% of planned outputs delivered in support of support risk assessors and decision-makers in the rapid assessment of risk and the determination of cleanup goals and procedures following contamination (Research)	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*
Percentage of planned outputs delivered in support of establishment of the environmental National Laboratory Response Network (Research)	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*

Background: EPA's homeland security research provides appropriate, effective, and rapid risk assessment guidelines and technologies to help decision-makers prepare for, detect, contain, and decontaminate building and water treatment systems against which chemical and/or biological attacks have been directed. The Agency intends to expand the state of the knowledge of potential threats, as well as its response capabilities, by assembling and evaluating private sector tools and capabilities so that preferred response approaches can be identified, promoted, and evaluated for future use by first responders, decision-makers, and the public. These products will enable first responders to better deal with threats to the public and the environment posed by the intentional release of toxic or infectious materials.

Human Health Research

In 2009 *Increased use of human health research products.*

In 2009 *Reduce average time to process research grant proposals while maintaining a credible and efficient merit review system.*

In 2008 *HH (Human Health)*

In 2007 *Increased use of human health research products*

In 2006 *HH (Human Health)*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of public health outcomes long-term goal. (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs delivered in support of mechanistic data long-term goal. (Research)	100	92	100	100	100	100	Percent
Percentage of planned outputs delivered in support of aggregate and cumulative risk long-term goal. (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal. (Research)	100	100	100	100	100	100	Percent

Background: The program aims to make measurable progress in reducing uncertainty in the science underlying human health risk assessment. The program also conducts research into methods of measuring public health outcomes resulting from risk management practices. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); 2) the number of its papers deemed "highly cited" (a measure of the quality and use of ORD's research); and 3) the percentage of peer-reviewed EPA risk assessments in which ORD research is cited in support of a decision.

Global Change Research

In 2009 *Increased use of global change research products.*

In 2008 *Increased use of global change research products*

In 2006 *Increased use of global change research products*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent progress toward completion of a framework linking global change to air quality. (Research)	60	65	75	75	85	95	Percent
Percentage of planned outputs delivered. (Research)			No Target Established	100	100	100	Percent

Background: The program aims to make measurable progress in enhancing the understanding of potential impacts of climate variability and change on the environment. Accordingly, the program provides stakeholders and policy makers with information to help support decision-making. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); 2) the number of its papers deemed "highly cited" and of "high impact" in bibliometric analyses (a measure of the quality and use of ORD's research). The program is also measuring its progress toward completing a framework linking global change to air quality.

Human Health Risk Assessment

In 2009 *Increased use of human health risk assessment program products.*

In 2008 *Increased use of human health risk assessment program products*

In 2007 *Increased use of human health risk assessment program products*

In 2006 *By 2006, deliver at least 20 dose-response assessments, provisional values, or pathogen risk assessments so that by 2010, at least 100 assessments have been made available through the Integrated Risk Information System (IRIS) database and other communications to EPA program offices, regions, states and Tribes providing the necessary information to predict risk and make risk management decisions that protect public health.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents. (Research)	No Target Established	100	90	100	90	90	Percent
Percentage of planned outputs delivered in support of HHRA health assessments. (Research)	100	100	90	100	90	90	Percent
Percentage of planned outputs delivered in support of HHRA Technical Support Documents. (Research)	No Target Established	81	90	100	90	90	Percent
Usefulness of HHRA's Air Quality Criteria Documents (AQCDs), represented by the number of days between the completion of AQCD peer review and publication of the EPA staff document that relies on AQCD (Research)	No Target Established	158	106	68	90	90	Days

Background: The program aims to make measurable progress in providing timely, peer-reviewed health assessments of priority environmental contaminants to support science-based decision-making in EPA's regulatory and cleanup programs. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); 2) the percentage of regulatory decisions in which decision-makers used HHRA peer-reviewed health assessments; and 3) the usefulness of HHRA's Integrated Science Assessment (ISA) documents as represented by the number of days between the completion of ISA peer review and publication of the EPA staff document that relies on the ISAs.

Safe Pesticides/Safe Products Research

In 2009 *Increased use of Pesticides and Toxics research products.*

In 2008 *Increased use of Pesticides and Toxics research products.*

In 2007 *Increased use of safe pesticides/safe products*

In 2006 *Increased use of pesticides and toxics research products*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of planned outputs delivered in support of the SP2 program's long-term goal one. (Research)	100	80	100	86	100	100	Percent
Percentage of planned outputs delivered in support of the SP2 program's long-term goal two. (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs delivered in support of the SP2 program's long-term goal three. (Research)	100	100	100	80	100	100	Percent

Background: The program aims to make measurable progress in prioritizing testing requirements and enhancing interpretation of data; conducting spatially explicit probabilistic ecological risk assessments; and supporting decisionmaking related to products of biotechnology and specific high priority individual/classes of pesticides and toxic substances. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the percentage of planned outputs completed on time; and 2) the percentage of program papers rated as "highly cited" and of "high impact" in its bibliometric analysis (a measure of quality and the use of ORDs research).

4-Year Performance Data
Annual Performance Goals and Measures

Ecosystems Research

In 2009 *Increased use of ecosystems research products.*

In 2008 *Increased use of ecosystems research products*

In 2006 *Increased use of ecosystems research products*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of states using a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of programs and policies. (Research)	25	25	30	30	35	40	States
Percentage of Ecological Research publications rated as highly-cited publications. (Research)	No Target Established	No Target Established	20.4	21.1	No Target Established	21.4	Percent
Percentage of Ecological research publications in "high-impact" journals. (Research)	No Target Established	No Target Established	20.3	20.8	No Target Established	21.3	Percent
Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for causal diagnosis tools and methods to determine causes of ecological degradation. (Research)	100	86	100	100	100	100	Percent
Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental forecasting tools and methods to forecast the ecological impacts of various actions. (Research)	100	100	100	100	100	100	Percent
Percentage of planned outputs delivered in support of State, tribe, and EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services. (Research)	100	100	100	100	100	100	Percent

4-Year Performance Data
Annual Performance Goals and Measures

Background: The program aims to make measurable progress in providing the scientific understanding to measure, model, maintain, and/or restore, at multiple scales, the integrity and sustainability of highly valued ecosystems now and in the future. EPA's Board of Scientific Counselors (BOSC) rates the program on its progress periodically, and the program responds to BOSC suggestions to ensure continued improvement. Additionally, the program aims to increase 1) the number of planned outputs completed on time (a measure of timeliness); 2) the number of its papers deemed "highly cited" and of "high impact" in bibliometric analyses (a measure of the quality and use of ORD's research); and 3) the number of states using a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of programs and policies.

GOAL 5: COMPLIANCE AND ENVIRONMENTAL STEWARDSHIP

Protect human health and the environment through ensuring compliance with environmental requirements by enforcing environmental statutes, preventing pollution, and promoting environmental stewardship. Encourage innovation and provide incentives for governments, businesses, and the public that promote environmental stewardship and long-term sustainable outcomes.

OBJECTIVE: ACHIEVE ENVIRONMENTAL PROTECTION THROUGH IMPROVED COMPLIANCE

By 2011, maximize compliance to protect human health and the environment through enforcement and other compliance assurance activities by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated by regulated entities, including those in Indian country. (Baseline: 3-year rolling average FYs 2003-2005: 900,000,000 pounds.)

Monitoring and Enforcement

In 2009 *Through monitoring and enforcement actions, EPA will increase complying actions, pollutant reduction or treatment, and improve environmental management practices.*

In 2008 *Through monitoring and enforcement actions, EPA will increase complying actions, pollutant reduction or treatment, and improve environmental management practices.*

In 2007 *Through monitoring and enforcement actions, EPA will increase complying actions, pollutant reduction or treatment, and improve environmental management practices.*

In 2006 *Through monitoring and enforcement actions, EPA will increase complying actions, pollutant reduction or treatment, and improve environmental management practices.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions. (civil enf) (3: Pollution Reduction/Prevention)	450	890	500	890	890	890	Million pounds

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated. (2: Regulated Party Activities)	30	Data Avail FY 2008	30	27	30	30	Percentage
Percentage of concluded enforcement cases requiring implementation of improved environmental management practices. (2: Regulated Party Activities)	65	82	70	70	70	70	Percentage
Percentage of regulated entities taking complying actions as a result of on-site compliance inspections and evaluations. (2: Regulated Party Activities)	*25*	*16*	*30*	*18*	*30*	*25*	*Percentage*
Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded enforcement actions (i.e., injunctive relief and SEPs) (2: Regulated Party Activities)	*4.1*	*5.0*	*4.2*	*10.6*	*4.3*	*4.4*	*Billion dollars*

Background: The FY 2005-2007 rolling average baseline for pounds of pollution estimated to be reduced, treated, or eliminated is 960,000,000 pounds of pollutants. The FY 2007 baseline for the percentage of concluded enforcement cases requiring that pollutants estimated to be reduced, treated, or eliminated is the FY2007 result which is 27 percent. The reason for using the FY2005 result as the FY2006 baseline is due to the data lag in the FY2006 result. The FY 2007 baseline for the percentage of concluded enforcement cases requiring implementation of improved environmental management practices is 70 percent. The FY 2006 baseline for the percentage of regulated entities taking complying actions as a result of on-site compliance inspections and evaluations is 18 percent. The FY 2005-2007 rolling average baseline for dollars invested in improved environmental performance or improved environmental management practices is $8,500,000,000.

Compliance Incentives

In 2009 *Identify and correct noncompliance and reduce environmental risks through an increase in the percent of facilities that use EPA incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve environmental management practices.*

In 2008 *Identify and correct noncompliance and reduce environmental risks through an increase in the percent of facilities that use EPA incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve environmental management practices.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2007 *Identify and correct noncompliance and reduce environmental risks through an increase in the percent of facilities that use EPA incentive policies to conduct environmental audits or other actions that reduce, treat, or eliminate pollution or improve environmental management practices.*

In 2006 *Through self-disclosure policies, EPA will increase the percentage of audits or other actions reducing pollutants or improving EMP.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Pounds of pollutants estimated to be reduced, treated, or eliminated, as a result of audit agreements. (3: Pollution Reduction/Prevention)	0.4	0.05	0.4	1.20	0.4	0.4	Million pounds

Background: The FY2007 baseline for pounds of pollutants estimated to be reduced, treated, or eliminated as a result of audit agreements is 1.2 million pounds of pollutants.

Compliance Assistance

In 2009 *Prevent noncompliance or reduce environmental risks through EPA compliance assistance by achieving: an increase in the percent of regulated entities that improve their understanding of environmental requirements; an increase in the number of regulated entities that improve environmental management practices; and an increase in the percentage of regulated entities that reduce, treat, or eliminate pollution.*

In 2008 *Prevent noncompliance or reduce environmental risks through EPA compliance assistance by achieving: an increase in the percent of regulated entities that improve their understanding of environmental requirements; an increase in the number of regulated entities that improve environmental management practices; and an increase in the percentage of regulated entities that reduce, treat, or eliminate pollution.*

In 2007 *Prevent noncompliance or reduce environmental risks through EPA compliance assistance by achieving: an increase in the percent of regulated entities that improve their understanding of environmental requirements; an increase in the number of regulated entities that improve environmental management practices; and an increase in the percentage of regulated entities that reduce, treat, or eliminate pollution.*

In 2006 *Through compliance assistance, EPA will increase the understanding of regulated entities, improve Environmental Management Practices, and reduce pollutants.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percentage of regulated entities receiving direct compliance assistance from EPA reporting that they improved environmental management practices as a result of EPA assistance. (2: Regulated Party Activities)	*50*	*74*	*50*	*91*	*50*	*60*	*Percentage*
Percentage of regulated entities receiving direct assistance from EPA reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance. (2: Regulated Party Activities)	*15*	*28*	*15*	*50*	*15*	*20*	*Percentage*

Background: The FY2007 baseline for the percentage of regulated entities receiving direct compliance assistance from EPA reporting that they improved EMP as a result of EPA assistance is 91%. The FY2007 baseline for the percentage of regulated entities receiving direct compliance assistance from EPA reporting that they reduced, treated, or eliminated pollution as a result of EPA compliance assistance is 50%. These measures are not calculated from a representative sample of the regulated entity universe. The percentages are based, in part, on the number of regulated entities that answered affirmatively to these questions on voluntary surveys. The percentages do not account for the number of regulated entities who chose not to answer these questions or the majority of entities who chose not to answer the surveys.

OBJECTIVE: IMPROVE ENVIRONMENTAL PERFORMANCE THROUGH POLLUTION PREVENTION AND OTHER STEWARDSHIP PRACTICES

By 2011, enhance public health and environmental protection and increase conservation of natural resources by promoting pollution prevention and the adoption of other stewardship practices by companies, communities, governmental organizations, and individuals.

Reducing PBTs in Hazardous Waste Streams

In 2009 *Reduce pollution in business operations.*

In 2008 *Reduce pollution in business operations.*

In 2007 *Reduce pollution in business operations.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Number of pounds (in millions) of priority chemicals reduced, as measured by National Partnership for Environmental Priorities members. (3: Pollution Reduction/Prevention)			0.5 M	1.3 M	1.0 M	1.0 M	Pounds

Background: The performance measure reflects the fact that the National Partnership for Environmental Priorities (NPEP) has quadrupled its members and now has over 100 partners, who have removed more than one million pounds of priority chemicals from the environment. As of August 2006, the NPEP program had also obtained industry commitments for 2.1 million pounds of priority chemical reductions through the year 2011. Reductions will be achieved primarily through source reduction made possible by safer chemical substitutes.

Innovation Activities

In 2008 *75% of innovation projects completed under the State Innovation Grant (SIG) Program and through other piloting mechanisms will achieve, on average, an 8% or greater improvement in environmental results from a project initiation baseline measure for the sectors and facilities involved (e.g., reductions in air or water discharges, improvements in ambient water or air quality, or improvements in compliance rates), or a 5% or greater improvement in cost-effectiveness and efficiency.*

In 2008 *Performance Track facilities collectively will meet 3 of the 5 annual performance improvement targets for reducing, on a normalized basis, water use, hazardous materials use, production of greenhouse gases, toxic discharges to water and combined NOx, SOx, VOC and PM emissions.*

In 2007 *Performance Track facilities collectively will meet 4 of the 6 annual performance improvement targets for 3.7 billion gallons of water use, 16.3 million MMBTUs of energy use, 1,050 tons materials use, 460,000 tons of non-hazardous solid waste, 66,000 tons of air releases, and 12,400 tons of discharges to water.*

In 2006 *Performance Track members collectively will achieve an annual reduction of: 600 million gallons in water use; 2.5 million MMBTUs in energy use; 15,000 tons of solid waste; 20,000 tons materials reduced; 6,000 tons of air releases; and 10,000 tons in water discharges, compared with 2001 results.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Specific annual reductions in six media/resource areas: water use, energy use, solid waste, air releases, water discharges, & materials use. (3: Pollution Reduction/Prevention)	*6*	*3*					*Media reduction*
Reduce 3.7 billion gallons of water use; 16.3 million MMBTUs of energy use; 1,050 tons of materials use; 460,000 tons of solid waste; 66,000 tons of air releases; & 12,400 tons of water discharges. (3: Pollution Reduction/Prevention)			*4*	*3*			*Media reduction*
Reduce water use at Performance Track facilities. (3: Pollution Reduction/Prevention)					*3,900,000,000*	*3,900,000,000*	*Gallons*
Reduce hazardous materials use at Performance Track facilities. (3: Pollution Reduction/Prevention)					*10,000*	*10,000*	*Tons*
Reduce production of greenhouse gases at Performance Track facilities. (3: Pollution Reduction/Prevention)					*175,000*	*175,000*	*MTCO2E*
Reduce toxic releases to water at Performance Track facilities. (3: Pollution Reduction/Prevention)					*220*	*220*	*Tons*
Reduce combined NOx, SOx, VOC and PM emissions at Performance Track facilities. (3: Pollution Reduction/Prevention)					*4,000*	*4,000*	*Tons*
75% of innov. proj. completed under the SIG prog. will achieve, on average, 8% or greater imp. in envtl results for sectors and facilities involved, or 5% or greater imp. in cost-effectiveness & effic (3: Pollution Reduction/Prevention)					*75*	*75*	*Percentage*

4-Year Performance Data
Annual Performance Goals and Measures

Background: For Performance Track, the baseline year is 2001 for FY 2005, 2006, and 2007. Performance will be measured against the 2001 baseline annual reduction of 475 M gallons of water conserved, 0.24 million MMBTUs of energy conserved, 150,000 tons of solid waste reduced, 1,113 tons of air emissions reduced, 6,870 tons of water discharged, and -2,154 tons of materials reduced. For FY 2008, the baseline year is 2005. The 2005 baseline annual normalized reductions are:, 3,387,333,545 gallons of water reduced, 8,794 tons of hazardous materials reduced, 151,129 MTCO2Es of greenhouse gas emissions reduced, 186 tons of toxic discharges to water reduced, and 3,533 tons of NOx, SOx, VOCs and PM emissions reduced.

EPA's State Innovation Grant program promotes the testing of innovative approaches in State environmental permitting programs. Individual projects are designed to test innovation that improves compliance rates, often within an entire business sector or across an entire permitting program, or improves the efficiency of permitting programs for either the regulated sector or the state environmental agency. Because each grant-supported project is unique, results can only be reported on a project-by project basis. EPA does not report program-wide results (e.g., total tons of air or water pollutants removed or prevented in a year) because not every project selected in a competition year focuses on a single environmental medium or pollutant. Rather, the EPA-funded projects help states test approaches that improve results, often in ways that address multi-media concerns. Similarly, these projects are demonstrations, or pilot tests of new approaches and the projects take 2-4 years to complete. Therefore, results for individual projects are reported at the end of each project. Results are usually described in terms such as an improvement in overall compliance rates at the end of a project above a baseline condition measured at the beginning of the project.

Reduction of Industrial / Commercial Chemicals

In 2009 *Prevent, reduce the need to recycle, treat, or dispose of hazardous industrial/commercial chemicals and enhance environmental stewardship and sustainability.*

In 2008 *Prevent, reduce and recycle hazardous industrial/commercial chemicals and improve environmental stewardship practices.*

In 2007 *Prevent, reduce and recycle hazardous industrial/commercial chemicals and municipal solid wastes.*

In 2006 *Prevent, reduce and recycle hazardous industrial/commercial chemicals and improve environmental stewardship practices.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
BTUs of energy reduced, conserved or offset by P2 program participants. (3: Pollution Reduction/Prevention)	*906.7B*	*4,442 B*	*1,106.8B*	*Data Avail 2008*	*1,217.4 B*	*1,580.9B*	*BTUs*
Gallons of water reduced by P2 program participants. (3: Pollution Reduction/Prevention)	*329M*	*2,272 M*	*1,790M*	*Data Avail 2008*	*1,640 M*	*1,791M*	*Gallons*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Business, institutional and government costs reduced by P2 program participants. (3: Pollution Reduction/Prevention)	38.2 M	86.8 M	44.3 M	Data Avail 2008	45.9 M	67.8 M	Dollars saved
Pounds of hazardous materials reduced by P2 program participants. (3: Pollution Reduction/Prevention)	401 M	394 M	414	419 M	429 M	494 M	Pounds

Background: The baseline for the Pollution Prevention Program BTUs is 0 in FY 2002. Data currently available indicate that the P2 program has reduced, conserved, or offset 8 Billion BTUs since 2002. The baseline for the Pollution Prevention Program gallons of water was 220 millions gallons in FY 2000. Data currently available indicate that the P2 program has reduced 9.4 billion gallons of water since 2000. The baseline for the Pollution Prevention Program cost savings is 0 dollar in FY 2002. Data currently available indicate that the P2 program has saved $178 million in business, government, and institutional costs since 2002. The baseline for the Pollution Prevention Program hazardous material reduced is 0.044 billion pounds in FY 2000. Data currently available indicate 2 billion pounds of hazardous materials have been reduced since FY 2000.

OBJECTIVE: IMPROVE HUMAN HEALTH AND THE ENVIRONMENT IN INDIAN COUNTRY

Protect human health and the environment on tribal lands by assisting federally-recognized tribes to build environmental management capacity, assess environmental conditions and measure results, and implement environmental programs in Indian country.

Tribal Environmental Baseline/Environmental Priori

In 2009 *Protect human health and the environment on tribal lands by assisting federally recognized tribes to: build environmental capacity; assess environmental conditions and measure results; and implement environmental programs in Indian country.*

In 2008 *Protect human health and the environment on tribal lands by assisting federally recognized tribes to: build environmental capacity; assess environmental conditions and measure results; and implement environmental programs in Indian country.*

In 2007 *Assist federally recognized tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.*

In 2006 *Assist federally recognized tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.*

4-Year Performance Data
Annual Performance Goals and Measures

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2009 Target	Unit
Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative). (1C: Fed/State/Tribal Gov. Activities)					6	7	Percent Tribes
Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.) (1C: Fed/State/Tribal Gov. Activities)					21	23	Percent Tribes
Percent of Tribes with an environmental program (cumulative). (1C: Fed/State/Tribal Gov. Activities)					57	60	Percent Tribes
Percent of tribes with EPA-approved multimedia workplans. (2: Regulated Party Activities)	39	42	42	59			Percent Tribes
Percent of tribes with delegated and non-delegated programs (cumulative). (2: Regulated Party Activities)	48	57	49	73			Percent Tribes
Percent of Tribes with EPA-reviewed monitoring and assessment occurring. (2: Regulated Party Activities)	30	30.8	31	43			Percent Tribes

Background: 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.

OBJECTIVE: ENHANCE SOCIETIES CAPACITY FOR SUSTAINABILITY THROUGH SCIENCE AND RESEARCH

Conduct leading-edge, sound scientific research on pollution prevention, new technology development, socioeconomic, sustainable systems, and decision-making tools. By 2011, the products of this research will be independently recognized as providing critical and key evidence in informing Agency polices and decisions and solving problems for the Agency and its partners and stakeholders.

ANNUAL PERFORMANCE GOALS AND MEASURES

Enabling Support Programs

NPM: OFFICE OF ADMINISTRATION AND RESOURCES MANAGEMENT

Energy Consumption Reduction

In 2009 *As required by Executive Order 13423: Strengthening Federal Environment, Energy, and Transportation Management, EPA will achieve a 12% reduction in energy consumption from the Agency's 2003 baseline.*

In 2008 *As required by Executive Order 13423: Strengthening Federal Environment, Energy, and Transportation Management, EPA will achieve a 9% reduction in energy consumption from the Agency's 2003 baseline.*

In 2007 *As required by Executive Order 13423: Strengthening Federal Environment, Energy, and Transportation Management, EPA will achieve a 6% reduction in energy consumption from the Agency's 2003 baseline.*

In 2006 *As required by the Energy Policy Act of 2005, EPA will achieve a 2% reduction in energy consumption from the Agency's 2003 baseline.*

	FY 2006		FY 2007		FY 2008	FY 2009	
Performance Measures	Target	Actual	Target	Actual			
Cumulative percentage reduction in energy consumption.	*2*	*3*	*6*	*9*	*9*	*12*	*Percent*

Background: On January 24, 2007, the President signed Executive Order: Strengthening Federal Environment, Energy, and Transportation Management, requiring all Federal Agencies to reduce its Green House Gas intensity and its energy use by 3% annually through FY 2015. For the Agency's 29 reporting facilities, the FY 2003 energy consumption of British Thermal Units (BTUs) per square foot is 346,518 BTUs per square foot.

Human Capital

In 2009 *EPA will develop workforce planning strategies that link current and future Human Capital needs to mission accomplishments which will result in significant reductions in skill gaps for Mission Critical Occupations (MCOs). In addition, EPA's recruitment strategy will focus on hiring needs that will encourage the use of hiring flexibilities, build on centralized and local recruitment approaches, and focus on attracting applicants who are talented, diverse, and committed to EPA's mission.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2008 *EPA will develop workforce planning strategies that link current and future Human Capital needs to mission accomplishments which will result in significant reductions in skill gaps for Mission Critical Occupations. In addition, EPA's recruitment strategy will focus on hiring needs that will encourage the use of hiring flexibilities, build on centralized and local recruitment approaches, and focus on attracting applicants who are talented, diverse, and committed to EPA's mission.*

In 2007 *EPA will develop workforce planning strategies that link current and future Human Capital needs to mission accomplishments which will result in significant reductions in skill gaps for Mission Critical Occupations. In addition, EPA's recruitment strategy will focus on hiring needs that will encourage the use of hiring flexibilities, build on centralized and local recruitment approaches, and focus on attracting applicants who are talented, diverse, and committed to EPA's mission.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008	FY 2009	
Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days			*45*	*28*	*45*	*45*	*Days*
For SES positions, the average time from date vacancy closes to date offer is extended, expressed in working days			*90*	*66*	*73*	*68*	*Days*
Agency Manager's satisfaction with the initial stages of the human resources hiring process, as measured by the average score across 4 questions in the OPM Management Hiring Satisfaction Survey.						*90*	*Percent*
Maintenance and improvement of MCO employee competencies, as measured by proficiency levels of competencies in MCO's re-assessed in 2009.						*80*	*Percent*

Background: Baselines for the new measures will be established in FY2007/08. For the average time to hire, these human capital performance measures and targets were selected from EPA's President's Management Agenda.

NPM: OFFICE OF ENVIRONMENTAL INFORMATION

Information Exchange Network

In 2009 *Improve the quality, comparability, and availability of environmental data for sound environmental decision-making through the Central Data Exchange (CDX).*

In 2008 *Improve the quality, comparability, and availability of environmental data for sound environmental decision-making through the Central Data Exchange (CDX).*

In 2007 *Improve the quality, comparability, and availability of environmental data for sound environmental decision-making through the Central Data Exchange (CDX).*

In 2006 *Improve the quality, comparability, and availability of environmental data for sound environmental decision-making through the Central Data Exchange (CDX).*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008	FY 2009	
Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	*29*	*32*	*36*	*37*	*45*	*60*	*Systems*
States, tribes and territories will be able to exchange data with CDX through nodes in real time, using standards and automated data-quality checking.					*55*	*55*	*Users*
Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	*47,000*	*62,000*	*55,000*	*88,516*	*100,000*	*110,000*	*Users*

Background: The Central Data Exchange program began in FY 2001.

Information Security

In 2009 *OMB reports that all EPA information systems meet/exceed established standards for security.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2008 *OMB reports that all EPA information systems meet/exceed established standards for security.*

In 2007 *OMB reports that all EPA information systems meet/exceed established standards for security.*

In 2006 *OMB reports that all EPA information systems meet/exceed established standards for security.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008	FY 2009	
Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	*100*	*100*	*100*	*100*	*100*	*100*	*Percent*

Background: In FY 2002, the Agency started planning an effort to expand and strengthen its information security infrastructure.

NPM: OFFICE OF THE INSPECTOR GENERAL

Fraud Detection and Deterrence

In 2009 *In 2009, the OIG will improve public confidence and integrity in EPA program operations by detecting and preventing fraud, abuse and breaches of security.*

In 2008 *In 2008, the OIG will improve public confidence and integrity in EPA program operations by detecting and preventing fraud, abuse and breaches of security.*

In 2007 *In 2007, OIG will improve public confidence and integrity in EPA program operations by detecting and preventing fraud, abuse and breaches of security.*

In 2006 *In 2006, the OIG will improve public confidence and integrity in EPA program operations by detecting and preventing fraud, abuse and breaches of security.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008	FY 2009	
Criminal, civil, administrative, and fraud prevention actions.	*80*	*121*	*80*	*103*	*80*	*80*	*Actions*

Background: In FY 2005, the OIG established a baseline of 83 criminal, civil, administrative, and fraud prevention actions.

Audit and Advisory Services

In 2009 *In 2009, the OIG will contribute to human health and environmental quality through audits, evaluations, advisory services, inspections, and investigations for improved Agency business practices, accountability, and performance.*

In 2008 *In 2008, the OIG will contribute to human health and environmental quality through audits, evaluations, advisory services, inspections, and investigations for improved Agency business practices, accountability, and performance.*

In 2007 *In 2007, the OIG will contribute to human health and environmental quality through audits, evaluations, advisory services, inspections, and investigations for improved Agency business practices, accountability, and performance.*

4-Year Performance Data
Annual Performance Goals and Measures

In 2006 *In 2006, the OIG will contribute to human health and environmental quality through audits, evaluations, advisory services, inspections, and investigations for improved Agency business practices, accountability, and performance.*

Performance Measures	FY 2006 Target	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	FY 2008	FY 2009	
Environmental and business actions taken for improved performance or risk reduction.	*303*	*407*	*318*	*464*	*334*	*318*	*Actions*
Environmental and business recommendations or risks identified for corrective action.	*925*	*1,024*	*925*	*949*	*971*	*903*	*Recommendations*
Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	*150*	*1,100*	*150*	*189*	*120*	*120*	*Percentage*

Background: In FY 2005, the OIG established a revised baseline of 564 environmental and business actions taken for improved performance or risk reduction; 885 environmental and business risks or recommendations identified for corrective action; and 150% in potential dollar return on investment as a percentage of OIG budget, from savings, questioned costs, fines, recoveries, and settlements. The baselines increased because the OIG began including the non-monetary results of "Single Audits" and audits performed for the OIG in its targets and results by acknowledging the increasing number and significance of actionable recommendations in these audits to improve the management of assistance agreements.

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

VERIFICATION AND VALIDATION

GOAL 1 OBJECTIVE 1

FY 2009 Performance Measures:

- **Tons of SO_2 emissions from electric power generation sources (tons/yr from 1980 baseline) (PART measure)**
- **Percent change in average sulfur deposition and mean ambient sulfate concentrations reduced (% from baseline) (PART measure)**
- **Percent change in average nitrogen deposition and mean ambient nitrate concentrations reduced (% from baseline) (PART measure)**

Performance Databases:

Emissions Tracking System (ETS) - SO_2 and NO_x emissions
- Clean Air Status and Trends Network (CASTNET) - dry deposition
- National Atmospheric Deposition Program (NADP) - wet deposition
- Temporally Integrated Monitoring of Ecosystems program (TIME) - surface water chemistry

Long-Term Monitoring Network program (LTM) – surface water chemistry

Data Sources: On a quarterly basis, ETS receives and processes hourly measurements of SO_2, NO_x, volumetric flow, CO_2, and other emission-related parameters from more than 3,400 fossil fuel-fired utility units affected under the Title IV Acid Rain Program. These measurements are collected by certified continuous emission monitoring systems (CEMS) or equivalent continuous monitoring methods.

CASTNET measures particle and gas acidic deposition chemistry. Specifically, CASTNET measures sulfate and nitrate dry deposition and meteorological information at approximately 88 monitoring sites, primarily in the East. Two additional sites are planned as part of a multi-year network refurbishment and modernization project. These sites are scheduled to be in operation by 2007 and will help fill the coverage gap in the middle of country. CASTNET is a long-term dry deposition network funded, operated and maintained by EPA's Office of Air and Radiation (OAR). The National Park Service operates approximately 30 of the monitoring stations in cooperation with EPA.

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 precipitation components. Specifically, NADP provides measurements of sulfate and nitrate wet deposition at approximately 255 monitoring sites. EPA, along with several other Federal agencies, states, and private organizations, provide funding and support for NADP. The Illinois State Water Survey/University of Illinois maintains the NADP database.

4-Year Performance Data
Annual Performance Goals and Measures

The deposition monitoring networks have been in operation for over 25 years. They provide invaluable measurements on long-term trends and episodes in acid deposition; such data are essential for assessing progress toward the program's intended environmental outcomes. These networks need to be modernized to ensure the continued availability of these direct environmental measures. Maintaining a robust long-term atmospheric deposition monitoring network is critical for the accountability of the Acid Rain and Clean Air Interstate Rule (CAIR) Programs (and/or Clear Skies if new legislation is enacted).

The TIME project measures surface water chemistry and is based on the concept of a probability sample, where each site is chosen to be statistically representative of a target population. In the Northeast (New England and the Adirondacks), this target population consists of lakes likely to be responsive to changes in rates of acidic deposition (i.e., those with Gran ANC < 100 μeq/L). In the Mid-Atlantic, the target population is upland streams with a high probability of responding to changes in acidic deposition (i.e., Northern Appalachian Plateau streams with Gran ANC < 100 μeq/L). Each lake or stream is sampled annually (in summer for lakes, in spring for streams), and results are extrapolated to the target population. The most recent (2003) TIME trends analysis reported data from 43 Adirondack lakes, 30 New England lakes, and 31 Appalachian Plateau streams.

The TIME project goals are to determine not only how a representative sample of water bodies is changing through time, but also whether the proportion of the population that is acidic has changed. The project is operated cooperatively with numerous collaborators in state agencies, academic institutions and other federal agencies.

The LTM project complements TIME's statistical approach to sampling lakes and streams. LTM samples a subset of sensitive lakes and streams with long-term data, most dating back to the early 1980s. These sites are sampled 3 to 15 times per year. This information is used to characterize how the most sensitive aquatic systems in each region are responding to changing deposition, as well as providing information on seasonal chemistry and episodic acidification. In most regions, a small number of higher ANC (e.g., GranANC >100 μeq/L) sites are also sampled, and help separate temporal changes due to acidic deposition from those attributable to other disturbances such as changes in land use. The most recent (2003) LTM trends analysis reported data from 48 Adirondack lakes, 24 New England lakes, 9 Northern Appalachian Plateau streams, and 69 streams in the Blue Ridge region of Virginia and West Virginia. The project is operated cooperatively with numerous collaborators in state agencies, academic institutions and other federal agencies.

Methods, Assumption, and Suitability: Promulgated methods are used to aggregate emissions data across all United States' utilities for each pollutant and related source operating parameters such as heat input.

QA/QC Procedures: Promulgated 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 a CEM fails the bias test, indicating a potential for systematic underestimation of emissions, the source of the error must be identified and corrected or the data are adjusted to minimize the bias. Each affected plant is required to maintain a written QA plan documenting performance of these procedures and tests. Further information is available at: http://www.epa.gov/airmarkets/reporting/index.html.

CASTNET established a Quality Assurance Project Plan (QAPP) in November 2001. The QAPP contains data quality objectives and quality control procedures for accuracy and precision. {U.S. EPA, Office of Air Quality Planning and Standards, *Clean Air Status and Trends Network (CASTNet) Quality Assurance Project Plan* (Research Triangle Park, NC: U.S. EPA, November 2001)}. In addition, the program publishes annual quality assurance reports. Both the CASTNET QAPP and 2003 Annual Quality Assurance Report may be found at http://www.epa.gov/castnet/library.html.

NADP has established data quality objectives and quality control procedures for accuracy, precision and representation, available on the Internet: http://nadp.sws.uiuc.edu/QA/. The intended use of these data is to establish spatial and temporal trends in wet deposition and precipitation chemistry.

For TIME and LTM, the field protocols, laboratory methods, and quality assurance procedures are specific to each research group. QA/QC information is contained in the cited publications of each research group and compiled in Newell et al. (1987). The EMAP and TIME protocols and quality assurance methods are generally consistent with those of the LTM cooperators, and are detailed in Peck (1992) and in Table 3 of Stoddard, *et al* (2003).

Data Quality Review: The ETS provides instant feedback to sources on data reporting problems, format errors, and inconsistencies. The electronic data file QA checks are described at http://www.epa.gov/airmarkets/reporting/index.html (see *Electronic Data Report Review Process, ETS Tolerance Tables*, *Active ETS Error Codes/Messages* and *Range Format Errors*). All quarterly reports are analyzed to detect deficiencies and to identify reports that must be resubmitted to correct problems. EPA also identifies reports that were not submitted by the appropriate reporting deadline. Revised quarterly reports, with corrected deficiencies found during the data review process, must be obtained from sources by a specified deadline. All data are reviewed, and preliminary and final emissions data reports are prepared for public release and compliance determination.

4-Year Performance Data
Annual Performance Goals and Measures

CASTNET underwent formal peer review in 1997 by a panel of scientists from EPA and the National Oceanic Atmospheric Administration (NOAA). Findings are documented in *Examination of CASTNET: Data, Results, Costs, and Implications* (United States EPA, Office of Research and Development, National Exposure Research Laboratory, February 1997).

The NADP methods of determining wet deposition values have undergone extensive peer review; this process has been managed by NADP program office 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.

The TIME and LTM data used in EPA trends analysis reports are screened for internal consistency among variables, including ion balance and conductance balance. Samples with unexplained variation in these variables are deleted. Sites with mean Gran ANC greater than 200 μeq/L also are deleted. EPA trends analyses exclude sites with chloride values that are outliers in their region, because high Cl- is typically associated with human development in the watershed. The Cl- and associated Na+ would alter normal soil ion exchange relationships, thus obscuring the response to acidic deposition.

Data Limitations: In order to improve the spatial resolution of CASTNET, additional monitoring sites are needed, particularly in the middle of the country.

Error Estimate: None

New/Improved Data or Systems: The program plans to modernize and enhance CASTNET to ensure network viability and enhance the monitoring capacity to support ongoing and future accountability needs, particularly relating to long range pollutant transport. The refurbishment of CASTNET will result in more comprehensive air quality data and information, made available faster by enabling real-time access to air quality information and promoting integration with other networks through regional/rural monitoring strategies. Refurbishment activities to be pursued in FY 2007 include: (1) completion of a pilot phase study to evaluate options for upgrading CASTNET with new advanced measurement instrumentation; (2) selection and procurement of advanced technology monitoring equipment for up to 10 sites; (3) establishment of 2 new sites in the middle of the country to improve geographic coverage and spatial resolution; and (4) implementation of new ecological indicators of air quality and atmospheric deposition to expand the suite of environmental metrics available for measuring the performance and efficiency of EPA's clean air programs.

References: For additional information about CASTNET, see http://www.epa.gov/castnet.html and for NADP, see http://nadp.sws.uiuc.edu/.

4-Year Performance Data
Annual Performance Goals and Measures

For a description of EPA's Acid Rain program, see
http://www.epa.gov/airmarkets/arp/index.html/ and in the electronic Code of Federal Regulations at http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C.html (40 CFR parts 72-78.)

For TIME and LTM data quality and QA/QC procedures, see
Newell, A. D., C. F. Powers, and S. J. Christie. 1987. Analysis of Data from Long-term monitoring of Lakes. U.S. Environmental Protection Agency, Corvallis, OR.

Peck, D. V. 1992. Environmental Monitoring and Assessment Program: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group. EPA/600/X-91/080, U.S. Environmental Protection Agency.

Stoddard, J. L., J. S. Kahl, F. A. Deviney, D. R. DeWalle, C. T. Driscoll, A. T. Herlihy, J. H. Kellogg, P. S. Murdoch, J. R. Webb, and K. E. Webster. 2003. Response of surface water chemistry to the Clean Air Act Amendments of 1990. EPA/620/R-03/001, U.S. Environmental Protection Agency, Corvallis, Oregon.

FY 2009 Performance Measures:

- **Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM 2.5) in all monitored counties from 2003 baseline (PART measure)**
- **Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline (PART measure)**

Performance Databases:

AQS —The Air Quality Subsystem (AQS) stores ambient air quality data used to evaluate an area's air quality levels relative to the NAAQS.

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 are clean air plans and define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards

Data Sources:
AQS: State & local agency data from State and Local Air Monitoring Stations (SLAMS).

Population: Data from Census-Bureau/Department of Commerce

FREDS: Data are provided by EPA's Regional offices.

Methods, Assumptions, and Suitability: Design values are calculated for every county with adequate monitoring data (for more information on and a definition for design values, see www.epa.gov/ttn/oarpg/t1/memoranda/cdv.pdf). Air quality levels are evaluated relative to the baseline level and the design value. The change in air quality concentrations is then multiplied by the number of people living in the county. This analysis assumes that the populations of the areas are held constant at 2000 Census levels. Data comparisons over several years allow assessment of the air program's success.

QA/QC Procedures: AQS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, EPA's National Performance Audit Program (NPAP), system audits, and network reviews (Available on the Internet: www.epa.gov/ttn/amtic/npaplist.html). To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and site 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. Further information available on the Internet: http://www.epa.gov/cludygxb/programs/namslam.html and through United States EPA's Quality Assurance Handbook (EPA-454/R-98-004 Section 15)

Populations: No additional QA/QC beyond that done by the Census Bureau/Department of Commerce.

FREDS: No formal QA/QC procedures.

Data Quality Review:

AQS: No external audits have been done in the last 3 years. However, internal audits are regularly conducted.

Populations: No additional QA/QC beyond that done by the Census Bureau/Department of Commerce.

FREDS: None

Data Limitations:

AQS: None known

Populations: Not known

FREDS: None known

Error Estimate: At this time it is not possible to develop an error estimate. There is still too much uncertainty in the projections and near term variations in air quality (due to meteorological conditions, for example).

New/Improved Data or Systems:
AQS: In January 2002, EPA completed the reengineering of AQS to make it a more user friendly, Windows-based system. As a result, air quality data are more easily accessible via the Internet. AQS has also been enhanced to comply with the Agency's data standards (*e.g.,* latitude/longitude, chemical nomenclature). Beginning in July 2003, agencies submitted air quality data to AQS thru the Agency's Central Data Exchange (CDX). CDX is intended to be the portal through which all environmental data coming to or leaving the Agency will pass.

Population: None

FREDS: None

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Cumulative percent reduction in the number of days to process SIP revisions weighted by complexity [PART efficiency measure].**

Performance Databases: None

Data Sources: Data are provided by EPA's regional offices.

Methods, Assumptions, and Suitability: Baseline for processing SIP revisions is 420 days (The Clean Air Act (CAA) provides 60 days for completeness + 360 days for technical review)

Each Region will maintain a SIP tracking system. It will include the date of receipt, interim dates and the final Regional Administrator's signature for each SIP submission. At the end of the fiscal year, each Region will sum the total allowable SIP processing days and the total actual SIP processing days for SIP revisions processed to final action during the fiscal year. Each Region will then submit the totals to the National SIP processing work group chair who will then divide the total actual processing days by the total allowable processing days and calculate the percent difference from base year processing time.

The SIP revisions are weighted by complexity because it takes some areas longer than others to reach attainment.

QA/QC Procedures: EPA regional staff ensure the number of SIP revisions finalized is equal to or less than the total number of SIP revisions received.

Data Quality Review: Same as QA/QC procedures

Data Limitations: None known

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: None

References: None.

FY 2009 Performance Measures:

- **Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application. (PART measure)**
- **Percent of new Title V operating permits issued within 18 months of receiving a complete permit application. (PART measure)**

Performance Databases: TOPS (Title V Operating Permit System).

Data Sources: Permitting Agencies (State and Local) via EPA Regional Offices

Methods, Assumptions, and Suitability: The performance measure is calculated by comparing the number of new permits or significant permit modifications issued during past 18 months to the total number of new permits or significant permit modifications received during the same period. Data are collected every 6 months. There are no underlying assumptions in the development of this measure.

QA/QC Procedures: Some data quality checks include: 1) making sure the number of permits issued in 18 months is equal to or less than the total number of permits received. 2) ensuring the percentages seem reasonable compared to previous reporting periods, and 3) making sure clock does not restart when additional information is submitted after the application is received.

Data Quality Review: Same as QA procedures

Data Limitations: None

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: TOPS has been revised and improved for 2006 to ensure better consistency between states and to specifically track PART measures.

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Percent of major NSR permits issued within one year of receiving a complete permit application. (PART measure)**

Performance Databases: RBLC (RACT (Reasonably Available Control Technology) BACT (Best Available Control Technology) LAER (Lowest Achievable Emissions Rate) Clearinghouse)

Data Sources: Permitting Agencies (State and Local)

Methods, Assumptions, and Suitability: The performance measure is calculated by determining the time period between the date of complete permit application and permit issuance. The percentage represents the number of major NSR permits issued within one year of complete application to the total number of permits issued within that same period. There are no underlying assumptions in the development of this performance measure.

QA/QC Procedures: Some data quality checks include: 1) making sure the permit issuance dates are after the complete permit application dates and appear reasonable, 2) ensuring the permit processing times are similar for comparable permits in previous reporting periods and 3) making sure the time period does not restart when additional information is submitted after the application is received.

Data Quality Review: Same as QA procedures

Data Limitations: None

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: N/A

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value. (PART measure)**

Performance Databases:

AQS —The Air Quality Subsystem (AQS) stores ambient air quality data used to evaluate an area's air quality levels relative to the NAAQS.

AIRNow DMC –The AIRNow Data Management System (DMC) stores real-time ambient air quality data used for the sole purpose of reporting real-time AQI and air quality forecasting.

Data Sources:

AQS/DMC: State & local agency data from State and Local Air Monitoring Stations (SLAMS) and National Air Monitoring Stations (NAMS).

Methods, Assumptions, and Suitability:

Data are gathered from monitors using EPA-approved federal reference and/or equivalent methods, all of which are published via the Federal Register. EPA assumes the collecting agency has properly maintained each monitor and that the data sent to EPA have passed at least an automated QA/QC check. The monitoring networks have been providing data for decades and the data are considered highly reliable. In addition these data form the basis of EPA's attainment decisions, trend analysis, and health impact assessments.

QA/QC Procedures:

AQS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, EPA's National Performance Audit Program (NPAP), system audits, and network reviews (Available on the Internet: www.epa.gov/ttn/amtic/npaplist.html). To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and site 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. Further information available on the

Internet: http://www.epa.gov/cludygxb/programs/namslam.html and through United States EPA's Quality Assurance Handbook (EPA-454/R-98-004 Section 15)

DMC: The QA/QC procedures at each State, local, Tribal, or Federal agency are the same as documented above. Because the DMC handles real-time data, additional QA/QC data checks are built into the data flow process to further guard against erroneous values being passed through the system. Data in the DMC are not considered final and are not used for any regulatory purpose. Data in the AQS system are the official values used for regulatory analyses.

Data Quality Review:

AQS: No external audits have been done in the last 3 years. However, internal audits are regularly conducted.

DMC: No external audits have been done in the last 3 years. However, internal audits are regularly conducted and data are routinely processed by external users where applicable.

Data Limitations:

AQS: None known

DMC: None known

Error Estimate: At this time it is not possible to develop an error estimate. There is still too much uncertainty in the projections and near term variations in air quality (due to meteorological conditions for example).

New/Improved Data or Systems:

AQS: In January 2002, EPA completed the reengineering of AQS to make it a more user friendly, Windows-based system. As a result, air quality data are more easily accessible via the Internet. AQS has also been enhanced to comply with the Agency's data standards (*e.g.*, latitude/longitude, chemical nomenclature). Beginning in July 2003, agencies submitted air quality data to AQS thru the Agency's Central Data Exchange (CDX). CDX is intended to be the portal through which all environmental data coming to or leaving the Agency will pass.

DMC: AIRNow Data Management Center was redesigned in 2004 to more efficiently handle additional pollutants and provide for easier access to real-time data. In addition, automated QA/QC procedures were updated and increased flexibility for state/local agencies to update information was included.

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/. For more information on the monitoring network, as well as reference and equivalent methods, see the Ambient Monitoring Technology Information Center (AMTIC) at: http://www.epa.gov/ttn/amtic . For information on the AIRNow real-time program, see: http://www.airnow.gov/.

FY 2009 Performance Measures:

- **Millions of tons of volatile organic compounds (VOCs) reduced since 2000 from mobile sources. (PART measure)**
- **Millions of tons of nitrogen oxide (NOx) reduced since 2000 from mobile sources. (PART measure)**
- **Tons of particular matter (PM 10) reduced since 2000 from mobile sources (PART measure)**
- **Tons of particular matter (PM 2.5) reduced since 2000 from mobile sources (PART measure)**
- **Limit the increase of CO Emissions (in tons) from mobile sources (PART measure)**

Performance Database: National Emissions Inventory Database. See: http://www.epa.gov/ttn/chief/trends/

Data Source: Mobile source emissions inventories and Regulatory Impact Analyses

Estimates for on-road, off-road mobile source emissions are built from inventories fed into the relevant models, which in turn provide input to the National Emissions Inventory Database.

The MOBILE vehicle emission factor model is a software tool for predicting gram per mile emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, carbon dioxide, particulate matter, and toxics from cars, trucks, and motorcycles under various conditions. Inputs to the model include fleet composition, activity, temporal information, and control program characteristics.

The NONROAD emission inventory model is a software tool for predicting emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, particulate matter, and sulfur dioxides from small and large off road vehicles, equipment, and engines. Inputs to the model include fleet composition, activity and temporal information.

Certain mobile source information is updated annually. Inputs are updated annually only if there is a rationale and readily available source of annual data. Generally, Vehicle Miles Traveled (VMT), the mix of VMT by type of vehicle (Federal Highway Administration (FHWA)-types), temperature, gasoline properties, and the designs of Inspection/Maintenance (I/M) programs are

updated each year. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when the Office of Transportation and Air Quality requests that this be done and is able to provide the new information in a timely manner. The most recent models for mobile sources are Mobile 6 and Nonroad 2002. (Available on the Internet at http://www.epa.gov/otaq/models.htm.)

EPA regulatory packages always include detailed Regulatory Impact Analysis which estimates the costs industry is projected to accrue in meeting EPA regulations. These cost estimates will form the basis of the numbers in the EPA performance measures. Also, costs for the EPA mobile source program (including personnel costs) will be included also. Estimates will be made for various years for tons/dollar for pollutants (the total of HC, CO, NOx, and PM) removed.

Methods, Assumptions, and Suitability: EPA issues emissions standards that set limits on how much pollution can be emitted from a given mobile source. Mobile sources include vehicles that operate on roads and highways ("on road" or "highway" vehicles), as well as nonroad vehicles, engines, and equipment. Examples of mobile sources are cars, trucks, buses, earthmoving equipment, lawn and garden power tools, ships, railroad locomotives, and airplanes. Vehicle and equipment manufacturers have responded to many mobile source emission standards by redesigning vehicles and engines to reduce pollution.

EPA uses models to estimate mobile source emissions, for both past and future years. The estimates are used in a variety of different settings. The estimates are used for rulemaking.

The most complete and systematic process for making and recording such mobile source emissions is the "Trends" inventory process executed each year by the Office of Air Quality Planning and Standards' (OAQPS) Emissions, Monitoring, and Analysis Division (EMAD). The Assessment and Standards Division, within the Office of Transportation and Air Quality, provides EMAD information and methods for making the mobile source estimates. In addition, EMAD's contractors obtain necessary information directly from other sources; for example, weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMAD creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with over 30 line items representing mobile sources. At irregular intervals as required for regulatory analysis projects, EMAD creates estimates of emissions for future years. When the method for estimating emissions changes significantly, EMAD 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. EMAD publishes the national emission estimates in hardcopy; county-level estimates are available electronically. Additional information about transportation and air quality related to estimating, testing for, and measuring emissions, as well as research being conducted on technologies for reducing emissions is available at http://www.epa.gov/otaq/research.htm

When major changes are made in the emission models or resulting inventories (and even the cost estimates), the performance measures will be reviewed to determine if they should be updated.

QA/QC Procedures: The emissions inventories are continuously improved.

Data Quality Review: The emissions inventories are reviewed by both internal and external parties, including the states, locals and industries.

Data Limitations: The limitations of the inventory estimates for mobile sources come from limitations in the modeled emission factors (based on emission factor testing and models predicting overall fleet emission factors in g/mile) and also in the estimated vehicle miles traveled for each vehicle class (derived from Department of Transportation data) http://www.epa.gov/otaq/m6.htm. 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. This nonroad emissions model accounts for over 200 types of nonroad equipment. Any limitations in the input data will carry over into limitations in the emission inventory estimates.

Error Estimate: Additional information about data integrity is available on the Internet: http://www.epa.gov/otaq/m6.htm.

New/Improved Data or Systems: To keep pace with new analysis needs, new modeling approaches, and new data, EPA is currently working on a new modeling system termed the Multi-scale Motor Vehicles and Equipment Emission System (MOVES). This new system will estimate emissions for on road and off road sources, cover a broad range of pollutants, and allow multiple scale analysis, from fine scale analysis to national inventory estimation. When fully implemented, MOVES will serve as the replacement for MOBILE6 and NONROAD. The new system will not necessarily be a single piece of software, but instead will encompass the necessary tools, algorithms, underlying data and guidance necessary for use in all official analyses associated with regulatory development, compliance with statutory requirements, and national/regional inventory projections. Additional information is available on the Internet: http://www.epa.gov/otaq/ngm.htm.

References: For additional information about mobile source programs see: http://www.epa.gov/otaq/.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 2003 baseline (PART measure)**
- **Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 2003 baseline (PART measure)**

Performance Databases:

- National Emissions Inventory (NEI) for Hazardous Air Pollutants (HAPs)
- EPA's Health Criteria Data for Risk Characterization

Data Source:

To better measure the percentage change in cancer and noncancer risk to the public, a toxicity-weighted emission inventory performance measure has been developed. This measure utilizes data from the NEI for air toxics along with data from EPA's Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html), which is a compendium of cancer and noncancer health risk criteria used to develop a risk metric. This compendium includes tabulated values for long-term (chronic) inhalation for many of the 188 hazardous air pollutants. These health risk data were obtained from various data sources including EPA, the U.S. Agency for Toxic Substances and Disease Registry, California Environmental Protection Agency, and the International Agency for Research on Cancer. The numbers from the health risk database are used for estimating the risk of contracting cancer and the level of hazard associated with adverse health effects other than cancer.

The NEI for HAPs includes emissions from large and small industrial sources inventoried as point sources, smaller stationary area and other sources, such as fires inventoried as non-point sources, and mobile sources. Prior to 1999 NEI for HAPs, there was the National Toxics Inventory (NTI). The baseline NTI (for base years 1990 - 1993) includes emissions information for 188 hazardous air pollutants from more than 900 stationary sources and from mobile 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 baseline NTI contains county level emissions data and cannot be used for modeling because it does not contain facility specific data.

The 1996 NTI and the 1999 NEI for HAPs contain stationary and mobile source estimates. These inventories also contain estimates of facility-specific HAP emissions and their source specific parameters such as location (latitude and longitude) and facility characteristics (stack height, exit velocity, temperature, etc.

The primary source of data in the 1996 and 1999 inventories are state and local air pollution control agencies and Tribes. These data vary in completeness, format, and quality. EPA

evaluates these data and supplements them with data gathered while developing MACT and residual risk standards, industry data, and TRI data.

For more information and references on the development of the 1996 NTI, please go to the following web site: www.epa.gov/ttn/chief/nti/index.html#nti. For more information and references on the development of the 1999 NEI for HAPs, please go to the following web site: www.epa.gov/ttn/chief/net/index.html#1999.

Methods, Assumptions and Suitability: As the NEI is only developed every three years, EPA utilizes an emissions modeling system to project inventories for "off-years" and to project the inventory into the future. This model, the EMS-HAP (Emissions Modeling System for Hazardous Air Pollutants), can project future emissions, by adjusting stationary source emission data to account for growth and emission reductions resulting from emission reduction scenarios such as the implementation of the Maximum Achievable Control Technology (MACT) standards.

Once the EMS-HAP process has been performed, the EPA would tox-weight the inventory by "weighting" the emissions for each pollutant with the appropriate health risk criteria. This would be accomplished through a multi-step process. Initially, pollutant by pollutant values would be obtained from the NEI for the current year and the baseline year (1990/93). Conversion of actual tons for each pollutant for the current year and the baseline year to "toxicity-weighted" tons would be accomplished by multiplying the appropriate values from the health criteria database such as the unit risk estimate (URE) or lifetime cancer risk (defined at www.epa.gov/ttn/atw/nata/gloss.htm#rfc) to get the noncancer tons. These toxicity-weighted values act as a surrogate for risk and allow EPA to compare the toxicity-weighted values against a 1990/1993 baseline of toxicity-weighted values to determine the percentage reduction in risk on an annual basis

Complete documentation on development of the NEI for HAPs can be found at http://www.epa.gov/ttn/chief/net/index.html. For more information and references on EMS-HAP, go to the following web sites: http://www.epa.gov/scram001/tt22.htm#aspen and http://www.epa.gov/ttn/chief/emch/projection/emshap.html. The growth and reduction information used for the projections are further described at http://www.epa.gov/ttn/chief/emch/projection/emshap.html.

QA/QC Procedures: The NTI and the NEI for HAPs are databases designed to house information from other primary sources. The EPA performs extensive quality assurance/quality control (QA/QC) activities, including checking data provided by other organizations, to improve the quality of the emission inventory. Some of these activities include: (1) the use of an automated format QC tool to identify potential errors of data integrity, code values, and range checks; (2) use of geographical information system (GIS) tools to verify facility locations; and (3) automated content analysis by pollutant, source category and facility to identify potential

problems with emission estimates such as outliers, duplicate sites, duplicate emissions, coverage of a source category, etc. The content analysis includes a variety of comparative and statistical analyses. The comparative analyses help reviewers prioritize which source categories and pollutants to review in more detail based on comparisons using current inventory data and prior inventories. The statistical analyses help reviewers identify potential outliers by providing the minimum, maximum, average, standard deviation, and selected percentile values based on current data. The EPA has developed an automated QC content tool for data providers to use prior to submitting their data to EPA. After investigating errors identified using the automated QC format and GIS tools, the EPA follows specific guidance on augmenting data for missing data fields. This guidance is available at the following web site: http://www.epa.gov/ttn/chief/emch/invent/qaaugmementationmemo99nei_60603.pdf.

The NTI database contains data fields that indicate if a field has been augmented and identifies the augmentation method. After performing the content analysis, the EPA contacts data providers to reconcile potential errors. The draft NTI is posted for external review and includes a README file, with instructions on review of data and submission of revisions, state-by-state modeling files with all modeled data fields, and summary files to assist in the review of the data. One of the summary files includes a comparison of point source data submitted by different organizations. During the external review of the data, state and local agencies, Tribes, and industry provide external QA of the inventory. The EPA evaluates proposed revisions from external reviewers and prepares memos for individual reviewers documenting incorporation of revisions and explanations if revisions were not incorporated. All revisions are tracked in the database with the source of original data and sources of subsequent revision.

The external QA and the internal QC of the inventory have resulted in significant changes in the initial emission estimates, as seen by comparison of the initial draft NEI for HAPs and its final version. For more information on QA/QC of the NEI for HAPs, please refer to the following web site for a paper presented at the 2002 Emission Inventory Conference in Atlanta. "QA/QC - An Integral Step in the Development of the 1999 National Emission Inventory for HAPs", Anne Pope, et al. www.epa.gov/ttn/chief/conference/ei11/qa/pope.pdf

EPA's Office of Environmental Information (OEI) has created uniform data standards or elements, which provide "meta" information on the standard NEI Input Format (NIF) fields. These standards were developed by teams representing states, Tribes, EPA and other Federal agencies. The use of common data standards among partners fosters consistently defined and formatted data elements and sets of data values, and provides public access to more meaningful data. The standards relevant to the NEI for HAPs are the: SIC/NAICS, Latitude/Longitude, Chemical Identification, Facility Identification, Date, Tribal and Contact Data Standards. The 1999 NEI for HAPs is compliant with all new data standards except the Facility Identification Standard because OEI has not completed its assignment of Facility IDs to the 1999 NEI for HAPs facilities.

For more information on compliance of the NEI for HAPs with new OMB Information Quality Guidelines and new EPA data standards, please refer to the following web site for a paper presented at the 2003 Emission Inventory Conference in San Diego. "The Challenge of Meeting New EPA Data Standards and Information Quality Guidelines in the Development of the 2002 NEI Point Source Data for HAPs", Anne Pope, et al. www.epa.gov/ttn/chief/conference/ei12/dm/pope.pdf. The 2002 NEI for HAPs will undergo scientific peer review in early 2005.

The tables used in the EPA's Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html) are compiled assessments from various sources for many of the 188 substances listed as hazardous air pollutants under the Clean Air Act of 1990. Because different sources developed these assessments at different times for purposes that were similar but not identical, results are not totally consistent. To resolve these discrepancies and ensure the validity of the data, EPA applied a consistent priority scheme consistent with EPA risk assessment guidelines and various levels of scientific peer review. These risk assessment guidelines can be found at http://www.epa.gov/ncea/raf/car2sab/preamble.pdf .

Data Quality Review: EPA staff, state and local agencies, Tribes, industry and the public review the NTI and the NEI for HAPs. To assist in the review of the 1999 NEI for HAPs, the EPA provided a comparison of data from the three data sources (MACT/residual risk data, TRI, and state, local and Tribal inventories) for each facility. For the 1999 NEI for HAPs, two periods were available for external review - October 2001 - February 2002 and October 2002 - March 2003. The final 1999 NEI was completed and posted on the Agency website in the fall of 2003. Beginning in 2005, the NTI will undergo an external scientific peer review.

The EMS-HAP has been subjected to the scrutiny of leading scientists throughout the country in a process called "scientific peer review". This ensures that EPA uses the best available scientific methods and information. In 2001, EPA's Science Advisory Board (SAB) reviewed the EMS-HAP model as part of the 1996 national-scale assessment. The review was generally supportive of the assessment purpose, methods, and presentation; the committee considers this an important step toward a better understanding of air toxics. Additional information is available on the Internet: www.epa.gov/ttn/atw/nata/peer.html.

The data compiled in the Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html) are reviewed to make sure they support hazard identification and dose-response assessment for chronic exposures as defined in the National Academy of Sciences (NAS) risk assessment paradigm (www.epa.gov/ttn/atw/toxsource/paradigm.html). Because the health criteria data were obtained from various sources they are prioritized for use (in developing the performance measure, for example) according to 1) conceptual consistency with EPA risk assessment guidelines and 2) various levels of scientific peer review. The prioritization process is aimed at incorporating the best available scientific data.

Data Limitations and Error Estimates: While emissions estimating techniques have improved over the years, broad assumptions about the behavior of sources and serious data limitations still exist. The NTI and the NEI for HAPs contain data from other primary references. Because of the different data sources, not all information in the NTI and the NEI for HAPs has been developed 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 baseline NTI, it is currently not suitable for input to dispersion models. For further discussion of the data limitations and the error estimates in the 1999 NEI for HAPs, please refer to the discussion of Information Quality Guidelines in the documentation at: www.epa.gov/ttn/chief/net/index.html#haps99 .

In 2004, the Office of the Inspector General (OIG) released a final evaluation report on "EPA's Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement" (report can be found at www.epa.gov/oig/reports/2004/20040331-2004-p-00012.pdf). The report stated that although the methods used have improved substantially, unvalidated assumptions and other limitations underlying the NTI continue to impact its use as a GPRA performance measure. As a result of this evaluation and the OIG recommendations for improvement, EPA prepared an action plan and is looking at ways to improve the accuracy and reliability of the data. EPA will meet bi-annually with OIG to report on its progress in completing the activities as outlined in the action plan.

While the Agency has made every effort to utilize the best available science in selecting appropriate health criteria data for toxicity-weighting calculations there are inherent limitations and errors (uncertainties) associated with this type of data. While it is not practical to expose humans to chemicals at target doses and observe subsequent health implications over long periods of time, most of the agencies health criteria is derived from response models and laboratory experiments involving animals. The parameter used to convert from exposure to cancer risk (i.e. the Unit Risk Estimate or URE) is based on default science policy processes used routinely in EPA assessments. First, some air toxics are known to be carcinogens in animals but lack data in humans. These have been assumed to be human carcinogens. Second, all the air toxics in this assessment were assumed to have linear relationships between exposure and the probability of cancer (i.e. effects at low exposures were extrapolated from higher, measurable, exposures by a straight line). Third, the URE used for some air toxics compounds represents a maximum likelihood estimate, which might be taken to mean the best scientific estimate. For other air toxics compounds, however, the URE used was an "upper bound" estimate, meaning that it probably leads to an overestimation of risk if it is incorrect. For these upper bound estimates, it is assumed that the URE continues to apply even at low exposures. It is likely, therefore, that this linear model over-predicts the risk at exposures encountered in the environment. The cancer weighting-values for this approach should be considered "upper bound" in the science policy sense.

All of the noncancer risk estimates have a built-in margin of safety. All of the Reference Concentrations (RfCs) used in toxicity-weighting of noncancer are conservative, meaning that they represent exposures which probably do not result in any health effects, with a margin of safety built into the RfC to account for sources of uncertainty and variability. Like the URE used in cancer weighting the values are, therefore, considered "upper bound" in the science policy sense. Further details on limitations and uncertainties associated with the agencies health data can be found at: www.epa.gov/ttn/atw/nata/roy/page9.html#L10

New/Improved Data or Systems: The 1996 NTI and 1999 NEI for HAPs are a significant improvement over the baseline NTI because of the added facility-level detail (e.g., stack heights, latitude/longitude locations), making it more useful for dispersion model input. Future inventories (2002 and later years) are expected to improve significantly because of increased interest in the NEI for HAPs by regulatory agencies, environmental interests, and industry, and the greater potential for modeling and trend analysis. During the development of the 1999 NEI for HAPs, all primary data submitters and reviewers were required to submit their data and revisions to EPA in a standardized format using the Agency's Central Data Exchange (CDX). For more information on CDX, please go the following web site: www.epa.gov/ttn/chief/nif/cdx.html

Beginning in 2006, the toxicity-weighted emission inventory data will also be used as a measurement to predict exposure and risk to the public. This measure will utilize ambient monitoring of air toxics as a surrogate for population exposure and compare these values with health benchmarks to predict risks.

References:

The NTI and NEI data and documentation are available at the following sites:

Emissions Inventory Data:	ftp://ftp.epa.gov/EmisInventory/
Available inventories:	1996 NTI, 1999 NEI for HAPs
Contents:	Modeling data files for each state
	Summary data files for nation
	Documentation
	README file
Audience:	individuals who want full access to NTI files
NEON:	http://ttnwww.rtpnc.epa.gov/Neon/
Available inventories:	1996 NTI and 1999 NEI for HAPs
Contents:	Summary data files
Audience:	EPA staff

CHIEF:	www.epa.gov/ttn/chief 1999 NEI for HAPs data development materials 1999 Data Incorporation Plan - describes how EPA compiled the 1999 NEI for HAPs QC tool for data submitters Data Augmentation Memo describes procedures EPA will use to augment data 99 NTI Q's and A's provides answers to frequently asked questions NIF (Input Format) files and descriptions CDX Data Submittal Procedures - instructions on how to submit data using CDX Training materials on development of HAP emission inventories Emission factor documents, databases, and models
Audience:	State/local/Tribal agencies, industry, EPA, and the public

Information on the Emissions Modeling System for Hazardous Air Pollutants:

EMS-HAP:	http://epa.gov/scram001/tt22.htm#aspen http://www.epa.gov/ttn/chief/emch/projection/emshap.html
Contents:	1996 NTI and 1999 NEI for HAPs
Audience:	public

Information on EPA's Health Criteria Data for Risk Characterization:

Health Criteria Data:	http://www.epa.gov/ttn/atw/toxsource/summary.html
Contents:	Tabulated dose response values for long-term (chronic) inhalation and oral exposures; and values for short-term (acute) inhalation exposure
Audience:	public

GOAL 1 OBJECTIVE 2

FY 2009 Performance Measures:

- **Number of additional homes (new and existing) with radon reducing features (PART measure)**
- **Total cost (public and private) per future premature lung cancer death prevented through lowered radon exposure (PART efficiency measure)**

Performance Database: Annual industry survey data of home builders provided by the National Association of Home Builders and internal database of fan sales.

Data Source: The survey is an annual sample of home builders in the United States most of whom are members of the National Association of Home Builders (NAHB). NAHB members construct 80% of the homes built in the United States each year. Using a survey methodology reviewed by EPA, NAHB Research Center 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. NAHB Research Center has been conducting this annual builder practices survey for over a decade, and has developed substantial expertise in the survey's design, implementation, and analysis. The statistical estimates are typically reported with a 95 percent confidence interval.

Radon fan manufacturers report fan sales to the Agency. EPA assumes one fan per radon mitigated home, and a fan life of 10 years, and then multiplies the assumed number of working fans by the assumed average of 2.67 people per household.

To estimate the reduced number of lung cancer deaths resulting from lowered radon exposure, EPA applies risk reduction estimates from its 2003 radon risk assessment to the number of existing homes mitigated for elevated radon levels and the number of new homes built with radon resistant new construction. Cost estimate includes both public and private sector costs, using EPA's 2003 estimate as a baseline.

Methods, Assumptions, and Suitability: NAHB Research Center conducts an annual survey of home builders in the United States to assess a wide range of builder practices. NAHB Research Center voluntarily conducts this survey to maintain an awareness of industry trends in order to improve American housing and to be responsive to the needs of the home building industry. The annual survey gathers information such as types of houses built, lot sizes, foundation designs, types of lumber used, types of doors and windows used, etc. The NAHB Research Center Builder Survey also gathers information on the use of radon-resistant design features in new houses, and these questions comprise about two percent of the survey questionnaire.

In January of each year, the survey of building practices for the preceding calendar year is typically mailed out to home builders. For the most-recently completed survey, for building practices during calendar year 2003, NAHB Research Center reported mailing the survey to about 45,000 active United States home building companies, and received about 2,300 responses, which translates to a response rate of about 5 percent. The survey responses are analyzed, with respect to State market areas and Census Divisions in the United States, to assess the percentage and number of homes built each year that incorporate radon-reducing features. The data are also used to assess the percentage and number of homes built with radon-reducing features in high radon potential areas in the United States (high risk areas). Other analyses include radon-reducing features as a function of housing type, foundation type, and different techniques for radon-resistant new home construction. The data are suitable for year-to-year comparisons.

This measure is a combination of data that includes additional number of homes built with radon resistant new construction (RRNC), reported by industry on an annual basis, as well as additional radon mitigations which are estimated from annual radon fan sales.

QA/QC Procedures: Because data are obtained from an external organization, QA/QC procedures are not entirely known. According to NAHB Research Center, QA/QC procedures have been established, which include QA/QC by the vendor that is utilized for key entry of data. Because fan sales data are obtained from an external organization, EPA relies on the business practices of radon fan manufacturers for reporting the data.

Data Quality Review: Because data are obtained from an external organization, Data Quality Review procedures are not entirely known. NAHB Research Center indicates that each survey is manually reviewed, a process that requires several months to complete. The review includes data quality checks to ensure that the respondents understood the survey questions and answered the questions appropriately. NAHB Research Center also applies checks for open-ended questions to verify the appropriateness of the answers. In some cases, where open-ended questions request numerical information, the data are capped between the upper and lower three percent of the values provided in the survey responses. Also, a quality review of each year's draft report from NAHB Research Center is conducted by the EPA project officer. Fan sales data are obtained from an external organization and EPA reviews the data to ascertain their reliability and discusses any irregularities with the relevant manufacturer.

Data Limitations: The majority of home builders surveyed are NAHB members. The NAHB Research Center survey also attempts to capture the activities of builders that are not members of NAHB. Home builders that are not members of NAHB are typically smaller, sporadic builders that in some cases build homes as a secondary profession. To augment the list of NAHB members in the survey sample, NAHB Research Center sends the survey to home builders identified from mailing lists of builder trade publications, such as Professional Builder magazine. There is some uncertainty as to whether the survey adequately characterizes the practices of builders who are not members of NAHB. The effects on the findings are not known.

Although an overall response rate of 5 percent could be considered low, it is the response rate for the entire survey, of which the radon-resistant new construction questions are only a very small portion. Builders responding to the survey would not be doing so principally due to their radon activities. Thus, a low response rate does not necessarily indicate a strong potential for a positive bias under the speculation that builders using radon-resistant construction would be more likely to respond to the survey. NAHB Research Center also makes efforts to reduce the potential for positive bias in the way the radon-related survey questions are presented.

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, there is again the possibility that the number of radon mitigated homes has been underestimated.

No radon vent fan manufacturer, vent fan motor maker or distributor is required to report to EPA; they provide data/information voluntarily to EPA. There are only four (4) radon vent fan manufacturers of any significance; one of these accounts for an estimated 70% of the market. Radon vent fans are unlikely to be used for non-radon applications. However, vent fans typically used for non-radon applications are perhaps being installed as substitutes for radon vent fans in some instances; estimated to be less than 1% of the total market. Ascertaining the actual number of radon vent fans used for other applications, and the number of non-radon fans being substituted in radon applications, would be difficult and expensive at this time relative to the benefit of having such data.

Error Estimate: See Data Limitations

New/Improved Data or Systems: None

References: The results are published by the NAHB Research Center in annual reports of radon-resistant home building practices. See http://www.nahbrc.org/ for more information about NAHB. The most recent report, "Builder Practices Report: Radon Reducing Features in New Construction 2003,"Annual Builder and Consumer Practices Surveys by the NAHB Research Center, Inc., November, 2004. Similar report titles exist for prior years.

See http://www.epa.gov/iaq/radon/pubs/index.html for National performance/progress reporting (National Radon Results: 1985-to 2003) on radon, measurement, mitigation and radon-resistant new construction.

FY 2009 Performance Measures:

- **Number of people taking all essential actions to reduce exposure to indoor environmental asthma triggers (PART measure)**
- **Annual cost to EPA per person with asthma taking all essential actions to reduce exposure to indoor environmental asthma triggers (PART efficiency measure)**

Performance Database: The *National Survey on Environmental Management of Asthma and Children's Exposure to ETS* (NSEMA) provides information about the measures taken by people with asthma, and parents of children with asthma, to minimize exposure to indoor environmental asthma triggers, including environmental tobacco smoke (ETS). Additional information about asthma morbidity and mortality in the US is obtained from surveys conducted by the Centers for Disease Control and Prevention (CDC), including the National Health Interview Survey, the

National Health and Nutrition Examination Survey, and the Behavioral Risk Factor Surveillance Survey. Annual expenditures for health and lost productivity due to asthma are obtained from the National Heart Lung and Blood Institute (NHLBI) Chartbook www.nhlbi.nih.gov/resources/docs/04_chtbk.pdf. .

EPA also collects data on children exposed to environmental tobacco smoke in the home. This information is used in supporting the asthma goals of the program. EPA focuses its work on ETS on children in low income and minority populations, and on children with asthma. In addition to NSEMA, information about ETS is obtained periodically from the CDC studies cited above

Data Source: The *NSEMA* (OMB control number 2060-0490) source is EPA. Data on asthma morbidity and mortality is available from the National Center for Health Statistics at the CDC (www.cdc.gov/nchs). Data on annual expenditures for health and lost productivity due to asthma are obtained from the NHLBI Chartbook. (www.nhlbi.nih.gov/resources/docs/04_chtbk.pdf). EPA will gather asthma trigger data through questions that are being integrated into a CDC survey. Essential actions address mold, dust mites, secondhand smoke, cockroaches, pets, nitrogen dioxide, and chemical irritants. Cost includes EPA full cost of implementing the asthma program.

Methods, Assumptions and Suitability: End-of–year performance for the asthma program is a best professional estimate using all data sources (including information on annual measures on partner performance and advertising awareness outlined below). The estimate of the number of people with asthma who have taken steps to reduce their exposure to indoor environmental asthma triggers as of 2007 will be based on a projection from previous surveys, and this estimate will be verified using a national survey instrument in 2009. EPA is collaborating with CDC to integrate questions on environmental management of asthma into an existing CDC national survey mechanism to provide performance results data in the future. Also, data provided for the annual measures are used to support progress towards the long term performance measure.

The *NSEMA* (OMB control number 2060-0490) is the most robust data set for this performance measure, but it is not administered annually. The first survey, administered in 2003, was designed in consultation with staff from EPA and the CDC National Center for Health Statistics (NCHS) to ensure that respondents will understand the questions asked and will provide the type of data necessary to measure the Agency's objectives. In addition, care has been taken to ensure that the survey questions target the population with asthma by using the same qualifier question that appears on other national surveys on asthma collected by the CDC.

QA/QC Procedures: The *NSEMA* was designed in accordance with approved Agency procedures. Additional information is available on the Internet: http://www.epa.gov/icr/players.html. The computer assisted telephone interview methodology used for this survey helps to limit errors in data collection. In addition, the QA/QC procedures associated with conducting the survey include pilot testing of interview questions, interviewer

training to ensure consistent gathering of information, and random data review to reduce the possibility of data entry error.

Data Quality Review: EPA reviews the data from all sources to ascertain reliability.

Data Limitations:

Asthma: The survey is subject to inherent limitations of voluntary telephone surveys of representative samples. For example, 1) survey is limited to those households with current telephone service; 2) interviewers may follow survey directions inconsistently. An interviewer might ask the questions incorrectly or inadvertently lead the interviewee to a response; or 3) the interviewer may call at an inconvenient time (i.e., 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.).

ETS: Currently available cotinine (a chemical in environmental tobacco smoke) survey data do not address 50% of the age specific portion of EPA's target population. It does not include birth to three years old, the portion of children most susceptible to the effects of ETS.

Error Estimate: In 2003 collection with this instrument, the Agency achieved results within the following percentage points of the true value at the 95 percent confidence level (survey instrument):

Adult Asthmatics	plus or minus	2.4%
Child Asthmatics	plus or minus	3.7%
Low Income Adult Asthmatics	plus or minus	6.1%

These precision rates are sufficient to characterize the extent to which the results measured by the survey accurately reflect the characteristics of our nation's asthmatic population.

New/Improved Data or Systems: EPA is collaborating with CDC to integrate questions on environmental management of asthma into an existing CDC national survey mechanism to provide performance results data in the future. The 2003 NSEMA estimates, and the integration of the CDC survey population, will provide consistent tracking measures at a reduced cost, while reducing the burden to the public. This collaboration will improve national asthma surveillance efforts.

References:

Asthma
National Center for Health Statistics, Centers for Disease Control and Prevention (www.cdc.gov/nchs/)

EPA Indoor Environments Division (www.epa.gov/iaq/)

ETS
National Health Interview Survey and National Health and Nutrition Examination Survey are part of the National Center for Health Statistics, Centers for Disease Control and Prevention (http://www.cdc.gov/nchs last accessed)

Behavioral Risk Factor Surveillance Survey, Centers for Disease Control and Prevention (http://www.cdc.gov/brfss/index.htm),

US Surgeon General's report on tobacco (http://www.cdc.gov/tobacco/sgr/index.htm/),

National Cancer Institute's (NCI) *Tobacco Monograph Series* (http://cancercontrol.cancer.gov/tcrb/monographs/),

NCI funded *Tobacco Use Supplement* portion of the US Census Bureau's *Current Population Survey* (http://riskfactor.cancer.gov/studies/tus-cps/),

Healthy People 2010 (http://www.healthypeople.gov/).

FY 2009 Performance Measure:

- **Additional health care professionals trained annually by EPA and its partners on the environmental management of asthma triggers (PART measure)**

Performance Database: The performance database consists of quarterly Partner status reports used to document the outcomes of individual projects.

Data Source: Partner status reports are generated by those organizations receiving funding from EPA and are maintained by individual EPA Project Officers.

Methods, Assumptions and Suitability: On an annual basis, EPA requires (programmatic terms and conditions of the award) all funded organizations to provide reports identifying how many health care professionals are educated about indoor asthma triggers.

QA/QC Procedures: It is assumed that organizations report data as accurately and completely as possible; site-visits are conducted by EPA project officers.

Data Quality Review: Project officers review data quality.

Data Limitations: N/A

New/Improved Data or Systems: EPA is exploring the development of a centralized data base.

References: N/A

FY 2009 Performance Measure:

- **Percent of public that is aware of the asthma program's media campaign (PART measure)**

Performance Database: A media tracking study used to assess behavior change within that sector of the public viewing the public service announcements.

Data Source: An independent initiative of the Advertising Council provides media tracking of outcomes of all their public service campaigns and this is publicly available information.

Methods, Assumptions and Suitability: Methods are those of the Advertising Council, and not controlled by EPA.

QA/QC Procedures: Methods are those of the Advertising Council, and not controlled by EPA.

Data Quality Review: Methods are those of the Advertising Council, and not controlled by EPA.

Data Limitations: Methods are those of the Advertising Council, and not controlled by EPA.

New/Improved Data or Systems: Methods are those of the Advertising Council, and not controlled by EPA.

References: Advertising Council Reporting. EPA Assistance Agreement number X-82820301. For additional information see the Ad Council web site http://www.adcouncil.org/.

FY 2009 Performance Measures:

- **Estimated annual number of schools establishing Indoor Air Quality programs based on EPA's Tools for Schools guidance (PART measure)**
- **Total number of schools implementing an effective Indoor Air Quality plan (PART measure)**
- **Average cost to EPA per student per year in a school that is implementing an indoor air quality plan. (PART efficiency measure)**

Performance Database:

EPA collects national data by conducting a survey of indoor air quality management practices in schools approximately every three years. The first survey was administered in 2002. EPA is partnering with CDC to incorporate IAQ management practice indicators, consistent with the benchmark survey, into the School Health Policies and Programs Study (SHPPS) to be administered in 2006. The SHPSS survey is conducted at 6 year intervals so the next nationally representative data would be collected in 2012 and would measure progress against the long term 2012 program goal.

To measure annual progress, EPA estimates the number of schools who establish IAQ Tools for Schools (TfS) programs each year from reports from partner organizations and regional recruiters, supplemented by tracking the volume of guidances distributed and number of people trained by EPA and its partners. EPA also collects information on program benefits such as reduced school nurse visits, improved workplace satisfaction among staff, reduced absenteeism, and cost savings experienced by schools.

Data Source: The sources of the data include cooperative partners, USEPA and the statistical sample of all the public and private schools in the nation during the 1999 – 2000 school year (118,000); data are from the United States Department of Education National Center for Education Statistics.

On a 6 year basis, EPA collaborates with CDC to determine the number of schools implementing an IAQ plan. Effectiveness is defined as a plan that is consistent with EPA's Tool for Schools guidance and scores a 70 or higher on EPA's IAQ management index.

Total Number of students is derived from the number of schools multiplied by the nationwide average of 525 students, faculty and staff. Effectiveness is defined as a plan that is consistent with EPA's Tool for Schools guidance and scores a 70 or higher on EPA's indoor air quality (IAQ) management index. Cost includes EPA full cost of implementing IAQ programs.

Methods, Assumptions and Suitability: Calculations for the number of people experiencing improved IAQ are based upon an average 525 students, staff and faculty per school (data are

from the United States Department of Education National Center for Education Statistics). That number, along with the number of schools that are adopting/implementing TfS, are used to estimate the performance result.

End-of–year performance is a best professional estimate using all data sources. The survey provides more statistically sound results for one period of time; the next scheduled survey will provide performance results for year 2006. Key portions of EPA's 2006 survey will be included as part of CDC's 2006 School Health Policies and Programs Study, which is conducted every six years.

QA/QC Procedures: It is assumed that partner organizations report data as accurately and completely as possible; site visits and regular communication with grantees are conducted by EPA projects officers.

Data Quality Review: EPA reviews the data from all sources in the performance database to ascertain reliability and to resolve any discrepancies.

Data Limitations: The primary limitation associated with Cooperative Agreement Partner status reporting is the error introduced as a result of self-reporting.

Error Estimate: Not relevant for this year.

New/Improved Data or Systems: Prior to the 2002 survey, EPA tracked the number of schools receiving the TfS guidance and estimated the population of the school to determine the number of students/staff experiencing improved indoor air quality. The survey was administered to establish a baseline for schools implementing IAQ management practices. EPA queried a statistically representative sample of schools to estimate the number of schools that have actually adopted and implemented good IAQ management practices consistent with the TfS guidance. EPA has integrated key portions of the 2002 survey into CDC's School Health Policies and Programs Study, which will show progress from the baseline.

References: See the United States Department of Education National Center for Education Statistics, http://nces.ed.gov/. See also Indoor Air Quality Tools for Schools Kit (402-K-95-001) at http://www.epa.gov/iaq/schools and see www.cdc.gov/nccdphp/dash/shpps/. For additional information about the School Health Policies and Programs Study (SHPPS), a national survey periodically conducted to assess school health policies and programs at the state, district, school, and classroom levels.

GOAL 1 OBJECTIVE 3

FY 2009 Performance Measure:

- **Remaining US consumption of HCFCs, measured in tons of ozone depleting potential (ODP) (PART measure)**

Performance Database: The Allowance Tracking System (ATS) database is maintained by the Stratospheric Protection Division (SPD). ATS is used to compile and analyze quarterly information on U.S. production, imports, exports, transformations, and allowance trades of ozone-depleting substances (ODS).

Data Source: Progress on restricting domestic exempted consumption of Class II HCFCs is tracked by monitoring industry reports of compliance with EPA's phase-out regulations. Data are provided by U.S. companies producing, importing, and exporting ODS. Corporate data are typically submitted as quarterly reports. Specific requirements as outlined in the Clean Air Act are available on the Internet at: http://www.epa.gov/oar/caa/caa603.txt. Monthly information on domestic production, imports, and exports from the International Trade Commission is maintained in the ATS.

Methods, Assumptions and Suitability: Data are aggregated across all U.S. companies for each individual ODS to analyze U.S. total consumption and production.

QA/QC Procedures: Reporting and record-keeping requirements are published in 40 CFR Part 82, Subpart A, Sections 82.9 through 82.13. These sections of the Stratospheric Ozone Protection Rule specify the required data and accompanying documentation that companies must submit or maintain on-site to demonstrate their compliance with the regulation.

The ATS data are subject to a Quality Assurance Plan (Quality Assurance Plan, USEPA Office of Atmospheric Programs, July 2002). In addition, the data are subject to an annual quality assurance review, coordinated by Office of Air and Radiation (OAR) staff separate from those on the team normally responsible for data collection and maintenance. The ATS is programmed to ensure consistency of the data elements reported by companies. The tracking system flags inconsistent data for review and resolution by the tracking system manager. This information is then cross-checked with compliance data submitted by reporting companies. SPD maintains a user's manual for the ATS that specifies the standard operating procedures for data entry and data analysis. Regional inspectors perform inspections and audits on-site at the producers', importers', and exporters' facilities. These audits verify the accuracy of compliance data submitted to EPA through examination of company records.

Data Quality Reviews: The Government Accounting Office (GAO) completed a review of U.S. participation in five international environmental agreements, and analyzed data submissions

from the U.S. under the Montreal Protocol on Substances the Deplete the Ozone Layer. No deficiencies were identified in their January 2003 report.

Data Limitations: None, since companies are required by the Clean Air Act to report data. EPA's regulations specify a quarterly reporting system.

Error Estimate: None.

New/Improved Data or Systems: The Stratospheric Protection Division is developing a system to allow direct electronic reporting.

References: See http://www.epa.gov/ozone/desc.html for additional information on ODSs. See http://www.unep.ch/ozone/montreal.shtml for additional information about the Montreal Protocol. See http://www.unmfs.org/ for more information about the Multilateral Fund. Quality Assurance Plan, USEPA Office of Atmospheric Programs, July 2002.

GOAL 1 OBJECTIVE 4

FY 2009 Performance Measure:

- **Percentage of most populous U.S. cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations. (PART measure)**

Performance Database: EPA database of RadNet program expansion. Data from the near real time gamma component of the ambient air radiation monitoring system, RadNet, will be stored in the EPA RadNet database at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, AL.

Data Source: Data on the number and location of monitors will be stored in the NAREL RadNet program expansion database; U.S. Census Bureau population data will be used to calculate 100 most populous cities; environmental data from the RadNet system will be stored in the NAREL RadNet database.

Methods and Assumptions: These monitors will provide data on ambient environmental levels of radiation on an ongoing basis and in the event of a radioactive contamination event.

Suitability: This measure was selected to show the implementation of the fixed monitoring network and the benefit to population. Over time, once the system is fully implemented, this measure will become obsolete.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with the RadNet Quality Assurance Project Plan once it is complete (scheduled to be finalized in early 2008). Laboratory analyses of air filters and other media, as well as all calibrations, are closely controlled in compliance with the NAREL Quality Management Plan and applicable Standard Operating Procedures (EPA Office of Radiation and Indoor Air (ORIA), National Air and Radiation Environmental Laboratory Quality Management Plan Revision 1, dated March 15, 2001 and reaffirmed August 23, 2006).

Data Quality Review: Science Advisory Review Board reviewed and analyzed the RadNet system and presented their suggestions for the expansion and upgrade of the system. Advice on siting of the monitors was presented to EPA. (EPA SAB Report, Review of 2005 Agency Draft entitled "Expansion and Upgrade of the RadNet Air Monitoring Network, Vol. 1 & 2, Concept and Plan," Quality Review Draft, 8/17/06) http://epa.gov/sab/pdf/radnet_final_qual_rev_draft_08-17-06.pdf.

Data Limitations: N/A.

Error Estimate: It is not anticipated that significant error will occur in tracking the number of monitors placed in cities.

New/Improved Data or Systems: None planned at this time.

References: For more information about the system, see: www.epa.gov/narel/radnet

FY 2009 Performance Measure:

- **Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations (measured as percentage of radiation response team members and assets that meet scenario-based response criteria). (PART measure)**

Performance Database: Internal Database

Data Source: Annual measurement of readiness based on an evaluation of the emergency response assets.

Methods and Assumptions: EPA developed standardized criteria based on the functional requirements identified in the National Response Plan's Nuclear/Radiological Incident Annex and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A baseline analysis for the Radiological Emergency Response Team (RERT) was performed in 2005, for EAP Headquarters and is based on the effectiveness of the RERT during incidents and national exercises.

Suitability: This measure and its criteria were developed to compliment Department of Homeland Security criteria as well as those of the EPA Core Emergency Response and Removal (Core ER) program evaluation measures.

QA/QC Procedures: An evaluation panel consisting of three representatives from the Radiological Emergency Response Team (RERT), one from each Office of Radiation and Indoor Air (ORIA) Laboratory and one from ORIA Headquarters, and ORIA management representatives (including at least one representative from outside the ORIA Radiological Emergency Response Program) annually perform a critical evaluation of ORIA's Radiological Emergency Response Program's capabilities versus the standardized criteria, resulting in an overall annual percentage score, as well as component percentage scores. Representatives will not be involved in the evaluation of their own location. Members are chosen based on volunteerism and by lottery on an annual basis. The Panel is chaired by the non-RERT management representative

Data Quality Review: Evaluation information is provided to the ORIA Office Director annually for use in evaluating progress. Data quality is certified by the Laboratory Directors at the Radiation and Indoor Environments National Laboratory and the National Air and Radiation Environmental Laboratory as well as by the Division Director of the Radiation Protection Division.

Data Limitations: None known

Error Estimate: None known

New/Improved Data or Systems: N/A

References: Radiological Emergency Response Measurement Implementation Plan: Long-Term Outcome Performance Measure, Readiness. FY 2007 Radiation PART Assessment (Draft: 7/25/2007)

FY 2009 Performance Measure:

- **Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions). (PART Measure)**

Performance Database: Internal Database.

Data Source: EPA will conduct laboratory assessments between years 2006 to 2011 to determine commercial, state and federal laboratory capability, capacity, and qualifications. This

is a phased-in approach and initial work has already begun. In 2007, EPA has conducted an initial capacity and capability survey of select commercial radiation laboratories.

Methods and Assumptions: The percentage laboratory capacity that is needed is based on the Homeland Security Council Radiological Attack, Radiological Dispersal Device Scenario. Similarly, radiological scenario analytical needs will be based on the Homeland Security Council Radiological Dispersion Device (RDD) Scenario. Laboratory capacity determines, for example, equipment needs, whereas, analytical needs measurement determines expert modeling capability, etc. Both are important factors in determining level of readiness. Increased laboratory capacity for those laboratories assisted through EPA guidance and training will be calculated.

Suitability: This measure is critical to identifying level of readiness relative to radiological laboratory capacity in the event of an incident of national significance.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with EPA's Office of Radiation and Indoor Air Quality Management Plan Revision, dated October 2004.

Data Quality Review: Information gained from the laboratory assessments with respect to capacity and ability to meet method validation protocols will be used to determine laboratory capacity, which adheres to EPA quality criteria.

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Radiological Emergency Response Measurement Implementation Plan: Long-Term Outcome Performance Measure, Readiness. FY 2007 Radiation PART Assessment (Draft: 7/25/2007)

FY 2009 Performance Measure:

- **Average time of availability of quality assured ambient radiation air monitoring data during an emergency. (PART Measure)**

Performance Database: Data from the near real-time gamma component RadNet will be stored in an internal EPA database at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama.

4-Year Performance Data
Annual Performance Goals and Measures

Data Source: The baseline for this measure is the current calculated response time which is based on shipment time and laboratory analysis time. As real-time monitors are put into service, the efficiency of the system will increase. Near real-time units will have reliable data in hours compared to days for conventional monitors, which are dependent on shipment and analysis time of samples.

Methods and Assumptions: The time between data collection at the monitoring sites and availability of data for release by EPA will be determined annually for the system as a whole, including existing (legacy) monitors and new near real-time monitors. The efficiency data will be compiled from existing and ongoing operational records of RadNet.

The monitoring system efficiency is based on two assumptions: (1) 43 conventional (non-real-time) monitoring stations exist in the system before the addition of any real-time monitors, and (2) a baseline of two and one-half days (60 hours) are required for data to become available (during emergency conditions) from the 43 non-real-time monitors. The initial interval of 2.5 days assumes the network is in alert status when time counting begins. Six (6) hours is the time required for data to become available from the near real-time monitors.

Suitability: This measure provides key data regarding availability of data and operational readiness of the nationwide RadNet ambient radiation monitoring network.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with the RadNet Quality Assurance Project Plan once it is complete (scheduled to be finalized in early 2008). Laboratory analyses of air filters and other media, as well as all calibrations, are closely controlled in compliance with the NAREL Quality Management Plan and applicable Standard Operating Procedures (EPA Office of Radiation and Indoor Air, National Air and Radiation Environmental Laboratory Quality Management Plan Revision 1, dated March 15, 2001 and reaffirmed August 23, 2006).

Data Quality Review: The database will screen all incoming data from the monitoring systems for abnormalities as an indicator of either a contamination event or an instrument malfunction. Data will be held in a secure portion of the database until verified by trained personnel. Copies of quality assurance and quality control testing will also be maintained to assure the quality of the data.

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: This measure will use data from the enhanced RadNet ambient air radiation monitoring system.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP**

Performance Database: Internal Database

Data Source: EPA has established a range of baseline data from existing records that indicate the date(s) of the EPA site inspection and the EPA approval date for waste streams and waste characterization equipment. EPA will measure the time between the DOE request for approval/notification of change (or the date of the inspection, if applicable) to the date of EPA approval, disapproval or concurrence of the change.

Methods and Assumptions: Under the new requirements of 40 CFR Part 194.8, EPA will perform a baseline inspection of each DOE waste generator site. If all requirements are met, EPA will approve the site's waste characterization program and assign tiers, based on abilities demonstrated during the baseline inspection. DOE will inform EPA of changes in the waste characterization program that can affect the quality of the data required by EPA to ensure the disposal regulations are met. The tiering protocol, which applies to waste streams, equipment, and procedures, will require DOE to either notify EPA of changes to the waste characterization program prior to implementation of the change (Tier 1) or to notify EPA of the changes upon implementation (Tier 2). For Tier 1 changes, EPA may request additional information or conduct an inspection prior to issuing an approval.

EPA assumes that adequate resources commensurate with the workload (which varies by up to 3 fold on an annual basis) are available and that sufficiently qualified EPA personnel and contractor consultants are available.

Suitability: This measure provides key information about the time required for EPA to approve DOE's request to dispose of transuranic waste at the WIPP site.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with EPA Office of Radiation and Indoor Air Quality Management Plan Revision, dated October 2004.

Data Quality Review: N/A

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

4-Year Performance Data
Annual Performance Goals and Measures

References: The Department of Energy National TRU Waste Management Plan Quarterly Supplement http://www.wipp.energy.gov/shipments.htm contains information on the volumes of waste that are received at the DOE WIPP.

FY 2009 Performance Measure:

- **Population covered by Radiation Protection Program monitors per million dollars invested. (PART efficiency measure)**

Performance Database: EPA database of RadNet program expansion. The percent of the U.S. population covered is dependent on the number of monitors deployed and includes everyone in the continental U.S. within 25 miles of an ambient radiation monitor. Dollars invested includes the full budget of the Radiation Protection Program.

Data Source: The performance measurement data—percentage of U.S. population covered by the program—will be calculated annually from operational records maintained at the National Air and Radiation Environmental Laboratory. These records are an inherent part of program oversight and will not require special data collection efforts. U.S. population numbers are based on the Census 2000 from the U.S. Census Bureau. Program dollars are based on the full budget of the Radiation Protection Program, which will be retrieved from the EPA Financial Data Warehouse. The costs and data points produced will be determined annually for the system as a whole, including existing (legacy) monitors and new near real-time monitors.

Methods and Assumptions: This measure reflects the population covered (i.e., within 25 miles of a monitor) under an expanded and more robust system of radiation monitoring and assessment per program dollar. As such, it is a very conservative estimate of "coverage." In the event of a radiological emergency, the enhanced radiological monitoring system would support a number of response measures and activities that cover and apply to the population as a whole. This entails complete mobilization of EPA's Radiological Emergency Response Program and full deployment of all monitoring capability, including up to 40 portable RadNet monitors. The efficiency measure is defined as the total costs (including FTE) to run both the legacy and near real-time systems, which will provide scientists, decision makers, and the public information on ambient radiation levels in airborne particulates under normal conditions or during radiological incidents. As real-time monitors are put into service, the efficiency of the system will increase dramatically. Near real-time units produce reliable data each hour as opposed to twice weekly for conventional (legacy) monitors, which are dependent on shipment and analysis time of samples.

Suitability: This measure provides key information about population covered (i.e., within 25 miles of a monitor) under an expanded and more robust system of radiation monitoring and assessment per program dollar.

QA/QC Procedures: N/A

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: N/A

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

GOAL 1 OBJECTIVE 5

FY 2009 Performance Measures:

- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the buildings sector (PART measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the industry sector (PART measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the transportation sector (PART measure)**

Performance Database: Climate Protection Partnerships Division Tracking System. The tracking system's primary purpose is to maintain a record of the annual greenhouse gas emissions reduction goals and accomplishments for the voluntary climate program using information from partners and other sources. It also measures the electricity savings and contribution towards the President's greenhouse gas intensity goal.

Data Source: EPA develops carbon and non-CO_2 emissions baselines. A baseline is the "business-as-usual" case without the impact of EPA's voluntary climate programs. Baseline data for carbon emissions related to energy use comes from the Energy Information Agency (EIA) and from EPA's Integrated Planning Model (IPM) of the U.S. electric power sector. These data are used for both historical and projected greenhouse gas emissions and electricity generation, independent of partners' information to compute emissions reductions from the baseline and progress toward annual goals. The projections use a "Reference Case" for assumptions about growth, the economy, and regulatory conditions. Baseline data for non-carbon dioxide (CO_2) emissions, including nitrous oxide and other high global warming potential gases, are maintained by EPA. The non-CO2 data are compiled with input from industry and also independently from partners' information.

4-Year Performance Data
Annual Performance Goals and Measures

Data collected by EPA's voluntary programs include partner reports on facility- specific improvements (e.g. space upgraded, kilowatt-hours (kWh) reduced), national market data on shipments of efficient products, and engineering measurements of equipment power levels and usage patterns

Baseline information is discussed at length in the U.S. Climate Action Report 2002. The report includes a complete chapter dedicated to the U.S. greenhouse gas inventory (sources, industries, emissions, volumes, changes, trends, etc.). A second chapter addresses projected greenhouse gases in the future (model assumptions, growth, sources, gases, sectors, etc.)

U.S. Department of State. 2002. "U.S. Climate Action Report—2002. Third National Communication of the United States of America under the United Nations Framework Convention on Climate Change."

Partners do contribute *actual* emissions data biannually after their facility-specific improvements but these emissions data are not used in tracking the performance measure. EPA, however, validates the estimates of greenhouse gas reductions based on the actual emissions data received.

Methods, Assumptions, and Suitability: Most of the voluntary climate programs' focus is on energy efficiency. For these programs, EPA estimates the expected reduction in electricity consumption in kilowatt-hours (kWh). Emissions prevented are calculated as the product of the kWh of electricity saved and an annual emission factor (e.g., metric tons carbon equivalent (MMTCE) prevented per kWh). Other programs focus on directly lowering greenhouse gas emissions (e.g., Natural Gas STAR, Landfill Methane Outreach, and Coalbed Methane Outreach); for these, greenhouse gas emission reductions are estimated on a project-by-project basis. EPA maintains a tracking system for emissions reductions.

The Integrated Planning Model, used to develop baseline data for carbon emissions, is an important analytical tool for evaluating emission scenarios affecting the U.S. power sector. The IPM has an approved quality assurance project plan that is available from EPA's program office.

QA/QC Procedures: EPA devotes considerable effort to obtaining the best possible information on which to evaluate emissions reductions from voluntary programs. Peer-reviewed carbon-conversion factors are used to ensure consistency with generally accepted measures of greenhouse gas (GHG) emissions, and peer-reviewed methodologies are used to calculate GHG reductions from these programs.

Partners do contribute *actual* emissions data biannually after their facility-specific improvements but these emissions data are not used in tracking the performance measure. EPA, however, validates the estimates of greenhouse gas reductions based on the actual emissions data received.

Data Quality Review: The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. The second such interagency evaluation, led by the White House Council on Environmental Quality, examined the status of U.S. climate change programs. The review included participants from EPA and the Departments of State, Energy, Commerce, Transportation, and Agriculture. The results were published in the *U.S. Climate Action Report-2002* as part of the United States' submission to the Framework Convention on Climate Change (FCCC). The previous evaluation was published in the *U.S. Climate Action Report-1997*. 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.

Error Estimate: These are indirect measures of GHG emissions. Although EPA devotes considerable effort to obtaining the best possible information on which to evaluate emissions reductions from its voluntary programs, errors in the performance data could be introduced through uncertainties in carbon conversion factors, engineering analyses, and econometric analyses. The only programs at this time aimed at avoiding GHG emissions are voluntary.

New/Improved Data or Systems: The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. EPA continues to update inventories and methodologies as new information becomes available.

References: The U.S. Climate Action Report 2002 is available at: www.epa.gov/globalwarming/publications/car/index.html. The accomplishments of many of EPA's voluntary programs are documented in the Climate Protection Partnerships Division Annual Report. The most recent version is *Protecting the Environment Together: ENERGY STAR and other Voluntary Programs,* Climate Protection Partnerships Division 2003 Annual Report.

GOAL 1 OBJECTIVE 6

FY 2009 Performance Measures:

- **Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health (PART Measure)**
- **Percent of planned actions accomplished toward the long-term goal of reducing uncertainty in the science that supports the standard-setting and air quality management decisions (PART Measure)**

Performance Database: Integrated Resources Management System (internal database) and list of recommendations from the Board of Scientific Counselors (BOSC)

Data Source: Data are generated based on self-assessments of: 1) overall progress toward completing research goals, and 2) completion of distinct planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of the Clean Air Research Program's long-term goals, the program annually develops a list of key research milestones and outputs in support of the Multi-Year Plan that are scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time. Additionally, Clean Air research program "planned" actions include the completion of follow-up recommendations resulting from external peer reviews.

QA/QC Procedures: Procedures are now in place to require that all annual milestones be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management.

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Air Toxics Multi-Year Plan, available at: http://www.epa.gov/osp/myp/airtox.pdf

Particulate Matter Multi-Year Plan, available at: http://www.epa.gov/osp/myp/pm.pdf
National Ambient Air Quality Standards (NAAQS) Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html

FY 2009 Performance Measure:

- **Percentage of NAAQS program publications rated as highly cited papers (PART Measure).**

Performance Database: No internal tracking system.

Data Source: Searches of Thomson Scientific's *Web of Science* and *Scopus* are conducted to obtain "times cited" data for programs' publications. Analyses are completed using Thomson's *Essential Science Indicators (ESI)* and *Journal Citation Reports (JCR)* as benchmarks. *ESI* provides access to a unique and comprehensive compilation of essential science performance statistics and science trends data derived from Thomson's databases.

Methods, Assumptions and Suitability: For influence and impact measures, *ESI* employs both total citation counts by field and cites per paper scores. The former reveals gross influence while the latter shows weighted influence, also called impact. *JCR* is a recognized authority for evaluating journals. It presents quantifiable statistical data that provide a systematic, objective way to evaluate the world's leading journals and their impact and influence in the global research community. The two key measures used in this analysis to assess the journals in which a program's papers are published are the Impact Factor and Immediacy Index. The Impact Factor is a measure of the frequency with which the "average article" in a journal has been cited in a particular year. The Impact Factor helps evaluate a journal's relative importance, especially when compared to other journals in the same field.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Analyses do not capture citations within EPA regulations and other key agency documents.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Particulate Matter Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/dw_bibliometric_pm_only_0907.pdf.

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART Efficiency Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References:
National Ambient Air Quality Standards (NAAQS) Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html.

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

GOAL 2 OBJECTIVE 1

FY 2009 Performance Measures:

- **Percent of the population served by community water systems that meet all applicable health-based drinking water standards through approaches including effective treatment and source water protection [PART measure]**
- **Percent of the population in Indian country served by community water systems that receive drinking water that meets all applicable health-based drinking water standards [PART measure]**
- **Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards [PART measure]**
- **Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection [PART measure]**
- **The percentage of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance). [PART measure]**

Performance Database: Safe Drinking Water Information System - Federal Version (SDWIS or SDWIS/FED). SDWIS contains basic water system information, population served, and detailed records of violations of the Safe Drinking Water Act and the statute's implementing health-based drinking water regulations. The performance measures are based on the population served by community water systems and the number of community water systems that were active during any part of the performance year and did not have any violations designated as "health based." Exceedances of a maximum contaminant level (MCL) and violations of a treatment technique are health-based violations. SDWIS has provided annual results for ten years and reports on a fiscal year basis.

Data Source: Data are provided by agencies with primacy (primary enforcement authority) for the Public Water System Supervision (PWSS) program. These agencies are either: States, EPA for non-delegated states or territories, and the Navajo Nation Indian tribe, the only tribe with primacy. Primacy agencies collect the data from the regulated water systems, determine compliance, and report a subset of the data to EPA (primarily inventory and summary violations).

Methods, Assumptions and Suitability: Under the drinking water regulations, water systems must use approved analytical methods for testing for contaminants. State certified laboratories report contaminant occurrence to states that, in turn, determine exceedances of maximum contaminant levels or non-compliance with treatment techniques and report these violations to EPA. These results are subject to periodic performance audits and compared to results that states

report to SDWIS. Primacy agencies' information systems and compliance determinations are audited on an average schedule of once every 3 years, according to a protocol. To measure program performance, EPA aggregates the SDWIS data into national statistics on overall compliance with health-based drinking water standards using the measures identified above.

QA/QC Procedures: EPA conducts a number of Quality Assurance/Quality Control steps to provide high quality data for program use, including:

(1) SDWIS/FED edit checks built into the software to reject erroneous data.
(2) Quality assurance manuals for states and Regions, which provide standard operating procedures for conducting routine assessments of the quality of the data, including timely corrective action(s).
(3) Training to states on reporting requirements, data entry, data retrieval, and error correction.
(4) User and system documentation produced with each software release and maintained on EPA's web site. System, user, and reporting requirements documents can be found on the EPA web site, http://www.epa.gov/safewater/. System and user documents are accessed via the database link http://www.epa.gov/safewater/databases.html, and specific rule reporting requirements documents are accessed via the regulations, guidance, and policy documents link http://www.epa.gov/safewater/regs.html.
(5) Specific error correction and reconciliation support through a troubleshooter's guide, a system-generated summary with detailed reports documenting the results of each data submission, and an error code database for states to use when they have questions on how to enter or correct data.
(6) User support hotline available 5 days a week.

The SDWIS/FED equivalent of a quality assurance plan is the data reliability action plan[1] (DRAP). The DRAP contains the processes and procedures and major activities to be employed and undertaken for assuring the data in SDWIS meet required data quality standards. This plan has three major components: assurance, assessment, and control.

Data Quality Review: Data Quality Review: Routine data quality assurance and quality control analysis of SDWIS by the Agency revealed a degree of non-reporting of violations of health-based drinking water standards, and of violations of regulatory monitoring and reporting requirements. As a result, the Agency is now tracking and quantifying the quality of data reported to SDWIS/FED as part of the Agency's National Water Program Guidance. The Agency will continue follow and update the Data Reliability Implementation/Action Plan. EPA will continue to review the results of on-site data verification (and eDV) and initiate a discussion with individual states concerning any potential discrepancies with the data reported to

[1] *Data Reliability Action Plan.* U.S. EPA, October 2002. Office of Ground Water and Drinking Water internal work plan document. *Drinking Water Data Reliability Analysis and Action Plan (2003) For State Reported Public Water System Data In the EPA Safe Drinking Water Information System/Federal Version (SDWIS/FED)*

SDWIS/FED. The on-site DV will be conducted as described in the Data Verification Protocol. Even as improvements are made, SDWIS serves as the best source of national information on compliance with Safe Drinking Water Act requirements for program management, the development of drinking water regulations, trend analyses, and public information.

Data Limitations: Recent state data verification and other quality assurance analyses indicate that the most significant data quality problem is under-reporting by the states of monitoring and health-based standards violations and inventory characteristics. The most significant under-reporting occurs in monitoring violations. Even though those are not covered in the health based violation category, which is covered by the performance measure, failures to monitor could mask treatment technique and MCL violations. Such under-reporting of violations limits EPA's ability to: 1) accurately portray the amount of people affected by health-based violations, 2) undertake geo-spatial analysis, 3) integrate and share data with other data systems, and 4) precisely quantify the population served by systems, which are meeting the health-based standards. Therefore, the estimates of population-served could be high or low. As described in the Data Quality Review section above, EPA is currently changing the protocol to enhance the results of data audits as the best near-term option to improve these estimates, while continuing to explore other approaches, including use of contaminant occurrence data.

Error Estimate: EPA will be analyzing data, derived from the improved data audit protocol, with a robust statistical basis from which to extrapolate national results, and better aligned with requirements of the Data Quality Act. The long-term value of the improved audit process is that each year's results will be statistically representative and provide information closer in time to the needed performance reporting; for example, 2006 results, the first year of the improved audit process will be reported in 2007.

New/Improved Data or Systems: Several approaches are underway.

First, EPA will continue to work with states to implement the DRAP and ISP, which have already improved the completeness, accuracy, timeliness, and consistency of the data in SDWIS/FED through: 1) training courses for specific compliance determination and reporting requirements, 2) state-specific technical assistance, 3) increased number of data audits conducted each year, and 4) assistance to regions and states in the identification and reconciliation of missing, incomplete, or conflicting data.

Second, more states (as of January 2007, 53 States, Tribes, and territories are using SDWIS/STATE) will use SDWIS/STATE,[2] a software information system jointly designed by

[2] SDWIS/STATE (Version 8.1) is an optional Oracle data base application available for use by states and EPA regions to support implementation of their drinking water programs.
U.S. EPA, Office of Ground Water and Drinking Water. Data and Databases. Drinking Water Data & Databases – SDWIS/STATE, July 2002. Information available on the Internet: http://www.epa.gov/safewater/sdwis_st/current.html

states and EPA, to support states as they implement the drinking water program.

Third, EPA has modified SDWIS/FED to (1) simplify the database, (2) minimize data entry options resulting in complex software, (3) enforce Agency data standards, and (4) ease the flow of data to EPA through a secure data exchange environment incorporating modern technologies, all of which will improve the accuracy of the data. In 2006, full use of SDWIS/FED for receiving state reports will be implemented. Data will be stored in a data warehouse system that is optimized for analysis, data retrieval, and data integration from other data sources. It will improve the program's ability to more efficiently use information to support decision-making and effectively manage the program.

Finally, EPA, in partnership with the states, is developing information modules or data systems on other drinking water programs: the Underground Injection Control Program (UIC) and the Drinking Water State Revolving Fund. These modules will be integrated with SDWIS to provide a more comprehensive data set with which to assess the nation's drinking water supplies, a key component of the goal. Plans have now been developed for design of systems to address these data flows. Developing the systems to receive the data is scheduled for 2007.

References:
Plans*

- SDWIS/FED does not have a Quality Assurance Project Plan - it is a legacy system which has "evolved" since the early 80s prior to the requirement for a Plan. The SDWIS/FED equivalent is the Data Reliability Action Plan
- Information Strategy Plan – SDWIS/FED (see footnote 2)
- Office of Water Quality Management Plan, available at http://www.epa.gov/water/info.html
- Enterprise Architecture Plan

Reports*

- 1999 SDWIS/FED Data Reliability
- 2003 SDWIS/FED Data Reliability Report - contains the Data Reliability Action Plan and status report

Guidance Manuals, and Tools

- PWSS SDWIS/FED Quality Assurance Manual

* These are internal documents maintained by EPA's Office of Ground Water and Drinking Water. Please call 202-564-3751 for further information.

- Various SDWIS/FED User and System Guidance Manuals (includes data entry instructions, data On-line Data Element Dictionary-a database application, Error Code Data Base (ECDB) - a database application, users guide, release notes, etc.) Available on the Internet at http://www.epa.gov/safewater/sdwisfed/sdwis.htm
- Regulation-Specific Reporting Requirements Guidance. Available on the Internet at http://www.epa.gov/safewater/regs.html

Web site addresses

- OGWDW Internet Site http://www.epa.gov/safewater/databases.html and contains access to the information systems and various guidance, manuals, tools, and reports.
- Sites of particular interest are:
  http://www.epa.gov/safewater/data/getdata.html contains information for users to better analyze the data, and
  http://www.epa.gov/safewater/sdwisfed/sdwis.htm contains reporting guidance, system and user documentation and reporting tools for the SDWIS/FED system.

FY 2009 Performance Measures:

- **Fund Utilization Rate for the DWSRF [PART measure]**
- **Number of additional projects initiating operations [PART measure]**

Performance Database: Drinking Water State Revolving Fund National Information Management System (DWNIMS.)

Data Sources: Data are entered by state regulatory agency personnel and by EPA's Regional staff; they are collected and reported once yearly.

Methods, Assumptions and Suitability: Data entered into DWNIMS directly represent the units of performance for the performance measure. These data are suitable for year-to-year comparison and trend indication.

QA/QC Procedures: EPA's headquarters and Regional offices are responsible for compiling the data and querying states as needed to assure data validity and conformance with expected trends. States receive data entry guidance from EPA headquarters in the form of annual memoranda (e.g., "2005 DWNIMS Data Collection.")

Data Quality Reviews: EPA's headquarters and Regional offices annually review the data submitted by the states. State data are publicly available at http://www.epa.gov/safewater/dwsrf/dwnims.html in individual state reports. Headquarters addresses significant data variability issues directly with states or through the appropriate EPA Regional office. Additionally, EPA's contractor tests the data for logical consistency. An annual

4-Year Performance Data
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EPA headquarters' "DWNIMS Analysis" provides detailed data categorization and comparison. This analysis is used during:

1. Annual EPA Regional office and state reviews to identify potential problems with the program's pace which might affect the performance measure.
2. Reviews by EPA's headquarters of regional oversight of state revolving funds.
3. Annual reviews by EPA's Regional offices of their states' revolving funds operations.

State data quality is also evaluated during annual reviews performed by EPA Regions. Any inconsistencies that are found in need of correction are incorporated into future DWNIMS reports. These adjustments are historically rare and very minor.

Data Limitations: There are no known limitations in the performance data, which states submit voluntarily. Erroneous data can be introduced into the DWNIMS database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields have been largely reduced. These definitions are publicly available at: http://www.epa.gov/safewater/dwsrf/nims/dwdatadefs.pdf. There is typically a lag of approximately two months from the date EPA asks states to enter their data into the DWNIMS database, and when the data are quality-checked and available for public use.

New/Improved Data or Systems: This system has been operative since 1999. It is updated annually, and data fields are changed or added as needed.

References:
State performance data as shown in NIMS are available by state at:
http://www.epa.gov/safewater/dwsrf/dwnims.html
Definitions of data requested for each data field in NIMS is available at:
http://www.epa.gov/safewater/dwsrf/nims/dwdatadefs.pdf
2005 DWNIMS Data Collection – memo from Jeff Bryan, 7/12/05
DWNIMS analysis

FY 2009 Performance Measures:

- **Percentage of identified Class V motor vehicle waste disposal wells closed or permitted.**
- **Percentage of Class I, II, and III wells that maintain mechanical integrity without a failure that releases contaminants to underground sources of drinking water.**
- **Percentage of prohibited Class IV and high-priority, identified, potentially endangering Class V wells closed or permitted in ground-water based source water areas.**

4-Year Performance Data
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Performance Database: The Underground Injection Control (UIC) program is authorized under Part C Sections 1422 -1426 of the Safe Drinking Water Act (SDWA). Regulations for the UIC program are in 40 CFR Parts 144 - 148. Basic program information is collected from states and EPA's regional offices (regions) with direct implementation (DI) responsibilities through the 7520 Federal Reporting forms 1, 2A, 2B, 3 and 4. In July 2005, EPA issued a measures reporting assistance memorandum, "Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures." Starting in FY 2005, including annual updates thereafter, states report to EPA the results of their UIC performance measures. In the initial 2005 reporting, states or the regions, if they have direct implementation of the program, report the following information: (1) The number of Class I, II, III, and V violations and significant violations that have been identified and addressed; (2) the number of Class I, II, III and V inspections; (3) The number of Class I, II and III salt solution mining wells that maintained mechanical integrity; (4) the number of Class V wells in Source Water Protection Areas (SWPAs) with surveys completed; and (5) the number of high priority wells in ground water based SWPAs that are closed or permitted. This information was reported to help determine the impact that the UIC program is having relative to public health protection. It also helps assess the progress being made to protect underground sources of drinking water (USDW).

In FY 2003, EPA maintained pilot state-level summary data for each of these reporting elements in a spreadsheet format. In FY 2005, states and/or regions reported summary measures information through a spreadsheet. In FY 2006, measures data was entered into a web-based reporting form which mirrored the spreadsheet from the previous year. The UIC program will begin collecting program information in a UIC national database in 2007; this system will electronically transfer information from state databases to EPA's national database using EPA's Exchange Network. EPA is currently working with the regions and several states to complete development of the system and to begin populating it.

Data Source: Until the UIC national database is deployed for use, states or DI programs will report to EPA using the UIC Inventory/Performance Activity Measures System. This is a web-base data entry system. Starting in 2007, states and DI programs will transition to the UIC national data system for reporting of UIC data. - See section "New/Improved Data or Systems."

Methods, Assumptions and Suitability: For these measures, the states' reporting of progress is based on EPA's 2005 guidance, "Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures." States will only report state-level summary information, much of which is contained in state databases. State reporting will be based on definitions and procedures found in the guidance. EPA believes that the data will be reliable for use in making management decisions.

QA/QC Procedures: QA/QC procedures include validation of information in states' 7520 reporting forms. Additionally, a series of data checks are built into the web entry system. EPA's regional offices also will work with individual states to verify information. Additional checks are performed by EPA headquarters on randomly selected states.

Data Quality Reviews: EPA's regional offices will conduct data quality reviews of state data using the QA/QC procedures and work with states to resolve data issues. EPA headquarters will communicate any additional concerns that may occur. The national data system includes software to reject erroneous data. As a result, EPA expects the quality of data on the results of the assessments and source water protection activities to improve over time.

Data Limitations: Current reporting only provides summary-level information. There is no standard protocol for EPA to verify and validate this summary data against well-level information contained in state databases. Some of the information used for calculation of the measures has not been collected historically reducing the availability of information, which may cause the data to be incomplete and inconsistent across states.

Error Estimate: There is no basis for making an error estimate for these performance measures given the data limitations of state-level summary reporting described above.

New/Improved Data or Systems: The UIC national data base is being developed though consultation with regions and states. It will give EPA the ability to access the data directly from states through the Exchange Network using the Central Data Exchange (CDX). The data system will not only include the data for the measures but all of the data necessary for EPA to effectively manage the national program.

References:

Guidance, Regulations and Data Forms

- Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures (Reporting Assistance Memo)--7/06/06

- Code of Federal Regulations at 40 CFR Parts 144 through 148

- UIC Inventory/Performance Activity Measures System

- 7520 Federal Reporting Forms (OGWDW Homepage-UIC Program)
  Form 7520-1 (summary of permit and non permit actions taken by state)
  Form 7520-2A (summary of state compliance evaluation actions)
  Form 7520- 2B (summary of significant non-compliance)
  Form 7520-3(mechanical integrity test/remedial actions)
  Form 7520-4 (Quarterly Exceptions List)

Web site addresses

- *Safe Drinking Water Act Amendments of 1996*. P.L. 104-182. (Washington: 6 August 1996). Available on the Internet at: http://www.epa.gov/safewater/sdwa/sdwa.html
- For more detailed information on Underground Injection topics, US EPA Office of Ground Water and Drinking Water/UIC Program. Available on the website: http://www.epa.gov/safewater/uic.html

FY 2009 Performance Measure:

- **Percent of state-monitored shellfish-growing acres impacted by anthropogenic sources that are approved or conditionally approved for use.**

Performance Database: There is no database currently available, although one is under development (see below).[2] To date, data to support this measure have come from surveys of States that are members of the Interstate Shellfish Sanitation Conference (ISSC), conducted by NOAA at 5-year intervals and periodic updates requested from the Interstate Shellfish Sanitation Conference (most recent, 2005 data released in 2006).[3]

Data Source: The ISSC requests the data on approved acreages from shellfish producing states and prepares reports. Survey responses are voluntary.

Methods and Assumptions: The methods used by the state programs to produce the data used by the ISSC are based on the National Shellfish Sanitation Plan and Model Ordinance; the operation of those state programs is overseen by the FDA.[4]

Suitability: As water quality conditions are maintained or improved, "approved" or "conditionally approved" shellfish growing acres impacted by anthropogenic sources should not decrease. This measure is not suitable for annual comparison, but as reports are issued periodically by the ISSC, updates on progress can be provided. There is no other suitable surrogate.

QA/QC Procedures: States are responsible for the internal QA/QC of their data.

Data Quality Reviews: The ISSC reviews the state data during report preparation to ensure completeness and accuracy, and follows up with states where necessary.

Data Limitations: Based on NOAA's previous surveys and the voluntary nature of the information collected, potential data limitations may include incomplete coverage of shellfish growing areas.

Error Estimate: No estimates are available.

New/Improved Data or Systems: The ISSC initiated development of the Shellfish Information Management System (SIMS) in July 2002. The database is being developed and implemented by the National Oceanographic and Atmospheric Administration (NOAA) on behalf of the Interstate Shellfish Sanitation Conference (ISSC), a Cooperative Program chartered by the Food and Drug Administration (FDA). The database will include relevant information that is collected by State Shellfish Control Authorities. Historically, NOAA collected shellfish-growing area data in 5-year intervals, 1985, 1990, and 1995. These data were not stored in a database. Once operational, SIMS will be the first national shellfish growing area database and will include NOAA's 1995[5] and the states' baseline (the ISSC is considering the most appropriate baseline year) and most current year data. State summary information can then be used to track trends relevant to the performance measure, with the 1995 data as against the baseline. The SIMS database is designed as a real time database. The ISSC plans to request data updates annually, but states may update their data any time. These data may be accessed at any time so timely status reports can be generated.

Currently, no long-term database management plan exists.

References:

1. U.S. Environmental Protection Agency. 2006 - 2011 EPA Strategic Plan. Washington, D.C. Pre-publication Copy, September 29, 2006. http://www.epa.gov/ocfo/plan/plan.htm
2. Kracker, L.M., Comar P.G., Meaburn, G.M., and K Murugesan. 2005. SIMS: A Shellfish Information Management System for Molluscan Shellfish. NOAA Technical Memorandum NOS NCCOS 17. 53 pp.
3. Interstate Shellfish Sanitation Conference. Analysis of Classified Shellfish Waters 1985-2005. Columbia, South Carolina. September 2006. (Amended March 2007) http://www.issc.org
4. U.S. Food and Drug Administration. National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish 2005. Washington D.C. http://www.cfsan.fda.gov/~ear/nss3-toc.html
5. National Oceanic and Atmospheric Administration (NOAA), 1997. The 1995 National Shellfish Register of Classified Growing Waters. Silver Spring, MD: Office of Ocean Resources Conservation and Assessment, Strategic Environmental Assessments Division. 398 pp.

FY 2009 Performance Measure:

- **Percentage of women of child-bearing age having mercury levels in blood above the level of concern identified by the National Health and Nutrition Examination Survey (NHANES).**

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Performance Database: There is no publicly accessible database that contains this information. Rather, the information is reported by the Centers for Disease Control and Prevention (CDC) every two years. The latest report is the *Third National Report on Human Exposure to Environmental Chemicals*, which presents findings for the years 2001 and 2002, and was published in 2005. In the report, CDC reported that 5.7% of the women of child-bearing age have mercury blood levels above the level of concern.[1]

Data Source: CDC's National Center for Health Statistics conducts the National Health and Nutrition Examination Survey (NHANES) in which chemicals or their metabolites are measured in blood and urine samples from a random sample of participants. NHANES is a series of surveys designed to collect data on the health and nutritional status of the U.S. population. CDC reports the NHANES results in the *National Report on Human Exposure to Environmental Chemicals*. The *Second National Report on Human Exposure to Environmental Chemicals* was released in 2003 and presented biomonitoring exposure data for 116 environmental chemicals for the civilian, non-institutionalized U.S. population over the 2-year period 1999-2000. The *Third National Report on Human Exposure to Environmental Chemicals* presents similar exposure data for the U.S. population for 148 environmental chemicals over the period 2001-2002. The Third Report also includes the data from the Second Report. A date for release of the Fourth National Report on Human Exposure to Environmental Chemicals has not been set, but current expectation is that it will be published in summer 2008.

Methods and Assumptions: Biomonitoring measurements for the Report were from samples from participants in NHANES. NHANES collects information about a wide range of health-related behaviors, performs a physical examination and collects samples for laboratory tests. Beginning in 1999, NHANES became a continuous survey, sampling the U.S. population annually and releasing the data in 2-year cycles. The sampling plan follows a complex, stratified, multistage, probability-cluster design to select a representative sample of the civilian, noninstitutionalized population in the United States. Additional detailed information on the design and conduct of the NHANES survey is available at http://www.cdc.gov/nchs/nhanes.htm. The CDC National Center for Health Statistics (NCHS) provides guidelines for the analysis of NHANES data at http://www.cdc.gov/nchs/data/nhanes/nhanes_general_guidelines_june_04.pdf. Other details about the methodology including statistical methods are reported in the *Third National Report on Human Exposure to Environmental Chemicals*.

Suitability: This indicator was selected because it provides an indication of levels of exposure in the human population to organic mercury where the main source is the consumption of fish and shellfish contaminated with methylmercury. As consumers follow fish consumption advice, changes in mercury in blood levels will decrease. This measure is not suitable for annual comparison but the period reports form NHANES provides a direct measure of mercury in blood levels in a representative sample of the US population.

QA/QC Procedures: The CDC quality assurance and quality control procedures are not specified in the *Third National Report on Human Exposure to Environmental Chemicals*. However, the Data Sources and Data Analysis chapter in the report does delineate the assumptions inherent in the analysis.

Data Quality Review: The data comes from the NHANES study, which CDC has designed to have a high quality.

Data Limitations: NHANES is designed to provide estimates for the civilian, non-institutionalized U.S. population. The current design does not permit examination of exposure levels by locality, state, or region; seasons of the year; proximity to sources of exposure; or use of particular products. For example, it is not possible to extract a subset of the data and examine levels of blood lead that represent levels in a particular state's population.

Error Estimate: The *Third National Report on Human Exposure to Environmental Chemicals* provides 95% confidence intervals for all statistics. At the point of interest for this measure, the 95% confidence interval is roughly 1.2 ug/l.

New/Improved Data or Systems: None.

References:

1. Centers for Disease Control and Prevention. "Third National Report on Human Exposure to Environmental Chemicals." NCEH Pub. No. 05-0570. Atlanta, GA. July 2005. Available at http://www.cdc.gov/exposurereport/.

FY 2009 Performance Measure:

- **Number of waterborne disease outbreaks attributable to swimming in or other recreational contact with, coastal and Great Lakes waters measured as a five-year average.**

Performance Database: Data on waterborne disease outbreaks (WBDOs) are collected by the states and are submitted to the Centers for Disease Control (CDC) under an agreement with the Council of State and Territorial Epidemiologists, the organization that sponsors the collection of the data. EPA/ORD collaborates with CDC in the analysis of the data. The data are published every two years for the prior second and third years' occurrence of outbreaks as a Surveillance Summary in the CDC's Morbidity and Mortality Weekly Report (MMWR), e.g. data from 1997-1998 were published in 2000. Outbreaks of gastroenteritis, dermatitis, and other diseases are listed according to date of occurrence, state in which the outbreak occurred, etiological agent, the number of cases that resulted from the outbreak, class of the outbreak data (index of data quality for the reporting of the outbreak), and the type of source (e.g., lake, river, pool) involved.

Data Source: Since 1971, CDC and the U.S. Environmental Protection Agency have maintained a collaborative surveillance system for collecting and periodically reporting data that relate to occurrences and causes of WBDOs. The surveillance system includes data about outbreaks associated with drinking water and recreational water. State, territorial, and local public health departments are primarily responsible for detecting and investigating WBDOs and for voluntarily reporting them to CDC.

Methods and Assumptions: State, territorial, and local public health agencies report WBDOs to CDC on a standard form (CDC form 52.12). CDC annually requests reports from state and territorial epidemiologists or from persons designated as WBDO surveillance coordinators. As indicated above, the data are submitted to CDC by the states under an agreement with the Council of State and Territorial Epidemiologists. Original data forms and the primary database itself are not available for external review because of concerns about the integrity and confidentiality of the data, which include information such as the names of data reporters, specific identities of water bodies, and identities of facilities and properties, both public and private, at which the outbreaks occurred. Many, if not most outbreaks occur in treated man-made water environments which are not reflective of outcomes of Clean Water Act programs. Others occur in untreated natural waters in smaller water bodies not impacted by EPA programs or activities. Accordingly, cooperation of database managers is required to identify specific outbreaks which should be counted under this measure as occurring in waters of the United States.

The unit of analysis for the WBDO surveillance system is an outbreak, not an individual case of a waterborne disease, although this information is reported. Two criteria must be met for an event to be defined as a water-associated disease outbreak. First, two or more people must have experienced a similar illness after exposure to water. This criterion is waived for single cases of laboratory-confirmed primary amebic meningoencephalitis (PAM). WBDOs associated with cruise ships are not summarized in the CDC report.

Suitability: This indicator is suitable as a performance measure because it captures the increased incidence of outbreaks from recreational water contact due to poor water quality conditions. Controlling sources of water contamination would result in maintaining or improving water quality conditions, thereby avoiding an increase in outbreaks

QA/QC Procedures: Data are submitted to CDC on a standard reporting form in hard copy by mail. Procedures for reporting outbreaks on the Internet for web-entry electronic submission are currently under development. Upgrades to the reporting system to incorporate electronic data reporting are anticipated to be implemented within the next three years[1]. Currently, CDC annually obtains reports from state or territorial epidemiologists or persons designated as WBDO surveillance coordinators. Numeric and text data are abstracted from the outbreak form and supporting documents and entered into a database for analysis. Information on QA/QC

procedures employed by the individual states or other reporting entities is not included in the CDC reporting.

Data Quality Review: The CDC and EPA/ORD report team review the outbreak reports to ensure the information is complete, following up with the state or local government to obtain additional information where needed. There are currently no external party reviews of this information conducted prior to publication.

WBDOs reported to the surveillance system are classified according to the strength of the evidence implicating water as the vehicle of transmission. The classification scheme (i.e., Classes I--IV) is based on the epidemiologic and water-quality data provided on the outbreak report form. Epidemiologic data are weighted more than water-quality data. Although outbreaks without water-quality data might be included in this summary, reports that lack epidemiologic data were excluded. Single cases of PAM are not classified according to this scheme. Weighting of epidemiologic data does not preclude the relative importance of both types of data. The purpose of the outbreak reporting system is not only to implicate water as the vehicle for the outbreak but also to understand the circumstances that led to the outbreak.

Data Limitations: There are two primary limitations to the CDC WBDO data with respect to this performance measure. The first limitation relates to original data forms and the primary database itself not being available for external review. The implication of this limitation is that database managers or report authors will have to be consulted to identify which of the reported outbreaks have, in fact, occurred in Waters of the United States. The second limitation is the fact that very few outbreaks have been reported over the ten years of data that have been reviewed in consideration of a baseline for this measure.[2-6] The implication of this measure is that were a small number of outbreaks to occur within a given year, it may still be within the range of normal statistical variability and therefore not an effective performance measure.

One key limitation of the data collected as part of the WBDO surveillance system is that the information pertains only to disease outbreaks rather than endemic illness. The epidemiologic trends and water-quality concerns observed in outbreaks might not necessarily reflect or correspond with trends associated with endemic waterborne illness. To address this problem, EPA and CDC are collaborating on the NEEAR Water Study to assess the magnitude of waterborne illness associated with routine, non-outbreak-associated exposure to marine and freshwater recreational areas.

Error Estimate: The relative quality of data and the error estimate associated with data of a given quality are indicated by the classification of the outbreak report. A classification of I indicates that adequate epidemiologic and water-quality data were reported. Specifically, a classification of I indicates that adequate data were provided about exposed and unexposed persons with a relative risk or odds ratio of =>2 or P value of =<0.05, which indicates statistical significance. Higher classification numbers (II-IV) indicate relatively higher error estimates

based on factors such as completeness of data and sample size. For instance, outbreaks that affect fewer persons are more likely to receive a classification of III rather than I because of the relatively limited sample size available for analysis.

New/Improved Performance Data or Systems: The manual reporting of WBDOs has been practiced since the collaborative surveillance system for collecting and reporting data began in 1971. Plans are now in place to transform the outbreak reporting system over the next three years to incorporate electronic data reporting. It is anticipated that the implementation of these upgrades will increase the number of reported outbreaks substantially. An increased number of reported WBDOs resulting from electronic reporting would require the baseline for the performance measure to be reset to a baseline consistent with the new level of reporting in order to yield meaningful trends in the occurrence of waterborne outbreaks in the future.

References

1. U.S. EPA. Office of Research and Development. Personal Communication w/ Calderon RL, author. Washington, DC, December 2005.
2. Yoder JS, Blackburn BG, Craun GF, Hill V, Levy DA, Calderon RL, et al. Surveillance for waterborne-disease outbreaks---United States, 2001--2002. In: CDC Surveillance Summaries, October 22, 2004. MMWR 2004;53(SS-08): 1--22
3. Lee SH, Levy DA, Craun GF, Beach MJ, Calderon RL. Surveillance for waterborne-disease outbreaks---United States, 1999--2000. In: CDC Surveillance Summaries, November 22, 2002. MMWR 2002; 51(SS-8): 1--47.
4. Barwick RS, Levy DA, Craun GF, Beach MJ, Calderon RL. Surveillance for waterborne disease outbreaks---United States, 1997--1998. In: CDC Surveillance Summaries, May 26, 2000. MMWR 2000; 49 (No. SS-4):1--34.
5. Levy DA, Bens MS, Craun GF, Calderon RL, Herwaldt BL. Surveillance for waterborne-disease outbreaks---United States, 1995--1996. In: CDC Surveillance Summaries, December 11, 1998. MMWR 1998; 47(No. SS-5):1--34.
6. Kramer MH, Herwaldt BL, Craun GF, Calderon RL, Juranek DD. Surveillance for waterborne-disease outbreaks---United States, 1993--1994. In: CDC Surveillance Summaries, April 12, 1996. MMWR 1996; 45 (No. SS-1):1--33.

FY 2009 Performance Measure:

- **Percent of days of the beach season that coastal and Great Lakes beaches monitored by state beach safety programs are open and safe for swimming**

Performance Database: The data are stored in PRAWN (Program tracking, beach Advisories, Water quality standards, and Nutrients), a database that includes fields identifying the beaches for which monitoring and notification information are available and the date the advisory or closure was issued, thus enabling trend assessments to be made. The database also identifies

those states that have received a BEACH (Beaches Environmental Assessment and Coastal Health) Act [P.L. 106-284] grant. EPA reports the information annually, on a calendar year basis, each May. The calendar year data are then used to support fiscal year commitments (e.g., 2008 calendar year data are used to report against FY 2009 commitments). For the 2006 swimming season, States and Territories monitored for pathogens at 3,771 coastal and Great Lakes beaches. In re-evaluating their beach programs, several states combined small beaches into larger beaches during 2006, reducing the total number of beaches monitored (from 4,025 in 2005 to 3,771 in 2006), but maintaining the scope of their programs. [1]

Data Source: Since 1997 EPA has surveyed state and local governments for information on their monitoring programs and on their advisories or closures. The Agency created the PRAWN database to store this information. State and local governmental response to the survey was voluntary up through calendar year 2002. Starting in calendar year 2003, data for many beaches along the coast and Great Lakes had to be reported to EPA as a condition of grants awarded under the BEACH Act[2]. Since 2005, states have used an on-line process called eBeaches to electronically transmit beach water quality and swimming advisory information to EPA instead of using the paper survey. The latest information reported by a state or local government is accessible to the public through the BEACON (Beach Advisory Closing On-line Notification) system.

Methods and Assumptions: The data are an enumeration of the days of beach-specific advisories or closures issued by the reporting state or local governments during the year. Performance against the target is tracked using a simple count of the number of beaches responding to the survey and the days over which the advisory or closure actions were taken. This is compared to the total number of days that every beach could be open. Thus the data are suitable for the performance measure.

Suitability: This indicator is suitable as a performance measure because it captures the frequency of beach closings primarily due to poor water quality conditions. Controlling sources of contamination would result in water quality improvement at beach thereby leading to fewer closures.

QA/QC Procedures: Since 1997, EPA has distributed a standard survey form, approved by OMB, to coastal and Great Lake state and county environmental and public health beach program officials in hard copy by mail. The form is also available on the Internet for web-entry electronic submission. When a state or local official enters data using the web-entry format, a password is issued to ensure the appropriate party is completing the survey. Currently the Agency has procedures for information collection (see Office of Water's "Quality Management Plan," approved September 2001 and published July 2002[3]). In addition, coastal and Great Lakes states receiving BEACH Act grants are subject to the Agency's grant regulations under 40 CFR 31.45. These regulations require states and tribes to develop and implement quality assurance practices for the collection of environmental information.

Data Quality Review: EPA reviews the survey responses to ensure the information is complete, following up with the state or local government to obtain additional information where needed. The Agency also reviews the QA/QC reports submitted by States and Territories as part of their grant reporting. There have been no external party reviews of this information.

Data Limitations: From calendar year 1997 to calendar year 2002, participation in the survey and submission of data was voluntary. While the voluntary response rate has been high, it did not capture the complete universe of beaches. The voluntary response rate was 92% in calendar year 2002 (240 out of 261 contacted agencies responded). The number of beaches for which information was collected increased from 1,021 in calendar year 1997 to 2,823 in calendar year 2002. Participation in the survey is now a mandatory condition for implementation grants awarded under the BEACH Act program to coastal and Great Lakes states, with information now available for 3,771 of approximately 6,000 coastal and Great Lakes beaches. All coastal and Great Lakes states and territories utilize the implementation grants.

Error Estimate: Not all coastal and Great Lakes beaches are monitored. In 2006, States and Territories reported that they monitored at 3,771 of the approximately 6,000 coastal and Great Lakes beaches. This monitoring varies between States. For example, North Carolina monitors all its 243 beaches whereas South Carolina monitors 23 of 299 beaches it identified. Where monitoring is done, there is some chance that the monitoring may miss some instances of high pathogen concentrations. EPA's 2002 National Health Protection Survey of Beaches found that 90% of the nation's beaches are monitored once a week or less[4]. Studies in southern California found that weekly sampling missed 75% of the pathogen exceedances[5], and that 70% of the exceedances lasted for only one day.[6] An EPA Office of Research and Development (ORD) beach monitoring study found a positive correlation between pathogen indicator densities one day as compared to densities the next day, but that the correlation was negligible when compared to densities after four days[7]. These studies indicate that weekly sampling most likely misses many pathogen events that can affect public health. This information is not sufficient to calculate the potential error in the reporting, but it is sufficient to indicate that the reporting may understate the number of days that beaches should be closed or under advisory.

New/Improved Data or Systems: Participation in the survey is now a mandatory condition for grants awarded under the BEACH Act program. As the Agency awards these implementation grants, it will require standard program procedures, sampling and assessment methods, and data elements for reporting. The amount, quality, and consistency of available data will improve to the extent that state governments apply for and receive these grants. In FY 2009, EPA expects all 35 coastal and Great Lakes states to again apply for grants to implement monitoring and notification programs.

References:

1. U.S. EPA. Office of Water. "EPA's Beach Report: 2006 Swimming Season." EPA-823-R-

07-005. Washington, DC, May 2007. Available at http://www.epa.gov/waterscience/beaches/seasons/2006
2. U.S. EPA. Office of Water. "National Beach Guidance and Required Performance Criteria for Grants." EPA-823-B-02-004. Washington DC: EPA, June 2002. Available at http://www.epa.gov/waterscience/beaches/guidance/all.pdf
3. U.S. EPA. Office of Water. "A Quality Management Plan." EPA 821-X-02-001. Washington, DC: EPA, July 2002. Available at http://www.epa.gov/water/programs/qmp_july2002.pdf
4. U.S. EPA. Office of Water. "EPA's BEACH Watch Program: 2002 Swimming Season." EPA-823-F-03-007. Washington, DC, May 2003. Available at http://www.epa.gov/waterscience/beaches/beachwatch2003-newformat.pdf
5. Leecaster. M.K. and S.B. Weisberg, Effect of Sampling Frequency on Shoreline Microbiology Assessments, *Marine Pollution Bulletin*, 42(11), 2001.
6. Boehm, A.B., et. al., Decadal and Shorter Period Variability of Surf Zone Water Quality at Huntington Beach, California, *Environmental Science and Technology*, 36(18), 2002.
7. U.S. EPA. Office of Research and Development. "The EMPACT Beaches Project, Results and Recommendations from a Study on Microbiological Monitoring In Recreational Waters." EPA 600/9-02/xxx. Washington, DC, Sept. 2002. (Draft Report).

GOAL 2 OBJECTIVE 2

FY 2009 Performance Measure:

- **Percentage of waters assessed using statistically valid surveys [PART Annual Measure]**

Performance Database: Data generated from the national assessment will be housed in the EPA Office of Water's STORET (STOrage and RETrieval) data warehouse. Prior to entering the STORET warehouse, all datasets are housed in a temporary facility, such as ORD's SWIM database, where they are examined for QA purposes and undergo statistical analysis. Finalized datasets transferred to the STORET warehouse will include all water quality, physical and biological data and associated metadata for each survey. The STORET warehouse is available on the web at http://www.epa.gov/STORET/index.html. Once the data schema for biological and habitat data are developed and deployed for the Exchange Network-based water quality exchange (WQX) warehouse, these data will go directly to the WQX warehouse instead of STORET.

Data Source: Data are collected, processed and analyzed through EPA-State collaboration to assess and report on the condition of the nation's waters with documented confidence. Under this partnership, samples are collected across the country during a specified index period for each resource. Sites are sampled one time, with additional repeat samples collected at 10 percent of the sites to determine precision of methods. Surveys collect a suite of indicators relating to the

biological, physical habitat and water quality of the resource in order to assess the resource condition and determine the percentage meeting the goals of the CWA. Surveys will collect information on biological and abiotic factors at 30-50 sites on an ecoregion level II scale for each resource. Prior to sampling, field crews will undergo intensive training by EPA personnel on field sampling and collection techniques. Laboratory analysis will be conducted at either a state lab or contract lab following specified protocols for the survey. Data collection follows a Quality Assurance Project Plan (QAPP), with subsequent testing and auditing to ensure its application.

Methods, Assumptions and Suitability: The surveys are conducted using a probabilistic survey design, which allows extrapolation of results to the target population (specified water resource, e.g., wadeable streams, lakes, rivers, etc.). The collection design maximizes the spatial spread between sites, located by specific latitude and longitude combinations. The survey utilizes an indexed sampling period to increase the probability of accurately assessing condition and identifying any problems in water quality, physical or biological indices if they exist. Based on the QAPP and field protocol documents, a site is located by the sampling crew via Global Positioning System (GPS). Data are collected for each parameter following the protocols outlined in the field operations manual. Indices for the probabilistic surveys relate to the condition of the resource and the extent that the waters are supporting the fishable and swimmable goals of the Clean Water Act. Samples taken from the field are stored in accordance with field manual instructions and shipped to the processing laboratory. Laboratories will follow quality assurance (QA) plans and complete analysis and provide electronic information to the state or EPA. EPA and the state exchange data to ensure that each has a complete set. EPA and states analyze the data to assess regional and national condition of the water resource surveyed. Results of the analyses on a national and regional basis will be published in a publicly accessible peer reviewed report released within two years of sample collection. The overall change in condition of the water body type will be assessed on a five year cycle.

Assumptions: (1) The underlying target population (water resource sampled for the survey) has been correctly identified; (2) GPS is successful; (3) QAPP and field collection manuals are followed; (4) all samples are successfully collected; (5) all analyses are completed in accordance with the QAPP; and (6) a combination of data into indices is completed in a statistically rigorous manner.

Suitability: By design, all data are suitable to be aggregated up to the regional and national level to characterize the ecological condition of the waterbody resource and the associated stressors. Samples provide site specific point-in-time data and excellent representation of the entire resource (extrapolation to the entire resource supportable). Data will be used to characterize populations and subpopulations of waterbody resources through time and space. Data analysis and interpretation will be peer reviewed prior to completion of final report. The data are suitable for individual reports and to establish a baseline for subsequent surveys to evaluate trends.

QA/QC Procedures: Collection and processing of all samples are described in QAPP and Field Protocols documents associated with each survey. In addition, the QAPP will contain specific Data Quality Objectives (DQOs) and Measurement Quality Objectives (MQOs) associated with each survey. To ensure that the survey is obtaining the DQOs and MQOs, there are several QA steps built into each survey. Training for all crew members is required before sampling begins. Field evaluations are conducted for all crews to ensure methods are being followed. Each laboratory involved in the sample processing will adhere to the specified laboratory protocols and undergo a thorough and documented quality assurance/quality control (QA/QC) process. Submitted data will undergo a final QC check before analysis begins.

Data Quality Reviews: A peer review and public comment period will be held for each survey. During this time, the draft report will be posted on the web for interested parties to review and submit comments. An independent group of experts will be selected to serve on a peer review panel for the report. In house audits will also be conducted over the course of the survey.

Data Limitations: Because the data are collected in a manner to permit calculations of uncertainty and designed to meet specific Data Quality Objectives (DQOs), the results at the regional level are within about 2-4% of true values dependent upon the specific sample type. Detailed QA/QC checks throughout the survey reduce the data limitations and errors in sampling. The scale of the reporting units is limited by the number of samples taken in a specific region. To make a statistically valid statement about the condition of the resource, sample size should minimally include 30-50 sites per region. Since samples are collected one time at each site per survey, trends analysis will depend on future survey work. Lag time between sample collection and reporting will be between 1-2 years.

Error Estimate: The estimation of condition will vary for the national condition and the regional condition for each survey. The condition estimates are determined from the survey data using cumulative distribution functions and statistically-based uncertainty estimates.

New/Improved Data or Systems: Additional indicators, addressing regional specific needs can be added to the survey over time. QA requirements will be met by all laboratories participating in the surveys. Probabilistic surveys repeated on the same water body type utilizing a similar sample design will show condition trends for the resource on a broad geographic scale.

References:

Olsen, A. R. et al. 1999. *Statistical Issues for Monitoring Ecological and Natural Resources in the United States*. Environmental Monitoring and Assessment 54, 1-45

Stevens Jr., D. L. & Urqhart, N. S. 2000. *Response Designs and Support Regions in Sampling Continuous Domains.* Environmetrics 11, 11-41

Stevens Jr., D. L. 1997. Variable Density Grid-based Sampling Designs for Continuous Spatial Populations. Environmetrics 8, 167-195

STORET database website. http://www.epa.gov/STORET/index.html.

4-Year Performance Data
Annual Performance Goals and Measures

U.S. Environmental Protection Agency. 2001. *National Coastal Condition Report*. EPA-620/R-01/005
U.S. Environmental Protection Agency. 2004. *National Coastal Condition Report II*. EPA-620/R-03/002

FY 2009 Performance Measures:

- **Number of water body segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained [PART Long-term and Annual Measure]**
- **Remove the specific causes of waterbody impairment identified by States in 2002**
- **Improve water quality conditions in impaired watersheds nationwide using the watershed approach**
- **Cost per water segment restored [PART Annual efficiency]**

Performance Database: The Watershed Assessment Tracking Environmental Results System (WATERS– found at http://www.epa.gov/waters/) is EPA's approach for viewing water quality information related to these measures. WATERS can be used to view "303(d) Information," compiled from, *States' Listings of Impaired Waters as Required by Clean Water Act Section 303(d)* (referred to here in brief as "303(d) lists"), which are recorded in the National Total Maximum Daily Load (TMDL) Tracking System. This information (found at http://www.epa.gov/owow/tmdl/) is used to generate reports that identify waters that are not meeting water quality standards ("impaired waters") and that need one or more TMDLs to be developed. EPA combined this information with information and comment from EPA Regions and States, on other impaired waters (those for which TMDLs have been completed but are not yet meeting standards) to create the baseline data for these measures. As discussed below under "New and Improved Data Systems," EPA is creating a single database that will track all the impaired waters in the baseline for these measures.

There are several reasons why EPA or states may determine that specific water bodies listed as impaired in 2002, the baseline year, are no longer impaired in the reporting year. For example, water quality might improve due to EPA or state actions to reduce point and nonpoint source discharges of pollutants. In other cases, a state or EPA might conduct more robust monitoring studies and use these data to complete more accurate assessments of water quality conditions. In some cases, a state might modify its water quality standards, in accordance with EPA's regulations, to update scientific criteria or to better reflect the highest attainable conditions for its waters. Each of these examples represents a case where a formerly impaired water no longer may be found to exceed water quality standards. Any such removals of water body impairments will be recorded based on reports from states scheduled every two years through 2012.

EPA's measure that tracks the improvement of water quality conditions utilizes the information on impairments described above and incorporates two additional features: 12-digit hydrologic

unit code (HUC) boundaries and data on "watershed-wide water quality improvement." In 2007 (with some most current work in 2008), 12-digit HUC code watersheds will be completed, certified and stored on USDA's comprehensive website for HUC watershed information (see http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/index.html). EPA's $1.1M + investment in boundary delineation and partner investments has ensured that all boundaries needed for EPA strategic plan reporting will be completed prior to reporting deadlines. Data on water quality improvements (e.g., a 20% reduction in nitrogen levels) will be documented via the extensive process laid out in computational guidance for this measure and for the measures on water quality standards and waterbody impairment (see http://www.epa.gov/water/waterplan/documents/subobjective2_2_1.pdf)

The measure regarding the restoration of primarily NPS-impaired waters is being verified through a laborious and careful process, in which EPA Headquarters staff review and help prepare a detailed 2-page Fact Sheet that includes a description of the impairment and the causes of that impairment; a description of the activities that were undertaken to remove the impairment; the effect of those activities; and the partners involved in solving the problem. Each of these stories is uploaded to the public web site of www.epa.gov/nps/success, and only after uploaded is it counted towards this measure.

Data Source: The primary data source for these measures is State 303(d) lists of their impaired water bodies needing development of TMDLs and State Integrated Reports covering their required submittals of monitoring information pursuant to section 305(b) of the Clean Water Act. These lists/reports are submitted each biennial reporting cycle. The baseline for this measure is the 2002 list/2002 integrated reports. States prepare lists/reports using actual water quality monitoring data, probability-based monitoring information, and other existing and readily available information and knowledge the state has, in order to make comprehensive determinations addressing the total extent of the state's water body impairments. Once EPA approves a state's 303(d) list, the information is entered into WATERS, as described above. Throughout 2006 and 2007, EPA worked with States that did not submit Integrated Reports in 2002 to supplement their 2002 303(d) lists of impaired waters needing TMDLs with waters that were also impaired in 2002 but were not on 303(d) lists because all needed TMDLs were complete. Thus, EPA now has a more complete list of impaired waters for tracking under these measures.

The efficiency measure for the section 106 grant program is derived by dividing the actual expenditures or President Budget requests for the section 106 grant program, plus State funding matches for these grants (as reported to EPA by the States) by the cumulative number of water body segments restored.

Methods, Assumptions, and Suitability: States employ various analytical methods of data collection, compilation, and reporting including: 1) Direct water samples of chemical, physical, and biological parameters; 2) Predictive models of water quality standards attainment; 3)

Probabilistic models of pollutant sources; and 4) Compilation of data from volunteer groups, academic interests and others. EPA-supported models include BASINS, QUAL2E, AQUATOX, and CORMIX. Descriptions of these models and instructions for their use can be found at www.epa.gov/OST/wqm/. The standard operating procedures and deviations from standard methods for data sampling and prediction processes are stored by many States in the STOrage and RETrieval (STORET) database.

States exercise considerable discretion in using monitoring data and other available information to make decisions about which waters meet their designated uses in accordance with state water quality standards. EPA then aggregates State data to generate national performance measures.

Delays are often encountered in state 303d lists and 305b submissions, and in EPA's approval of the 303(d) portion of these biennial submissions. EPA encourages States to effectively assess their waters and make all necessary efforts to ensure the timely submittal of required § 303(d) lists of impaired waters. EPA will work with States to facilitate State submission of accurate, georeferenced, and comprehensive data. Also, EPA is heightening efforts to ensure expeditious review of the 303(d) list submissions with national consistency.

QA/QC Procedures: QA/QC of data provided by States pursuant to individual State 303(d) lists (under CWA Section 303(d)) and/or Integrated 305(b)/303(d) Reports) is dependent on individual state procedures. EPA regional staff interact with the States during the process of approval of the lists and before the information is entered into the database to ensure the integrity of the data, consistent with the Office of Water Quality Management Plan (QMP). EPA requires that each organization prepare a document called a QMP that: documents the organization's quality policy; describes its quality system; and identifies the environmental programs to which the quality system applies (e.g., those programs involved in the collection or use of environmental data).

Data Quality Review: Recent independent reports have cited that weaknesses in monitoring and 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*[3], the March 15, 2000 Government Accounting Office report *Water Quality: Key Decisions Limited by Inconsistent and Incomplete Data*[4], the 2001 National Academy of

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[3] USEPA, National Advisory Council for Environmental Policy and Technology, *Report of the Federal Advisory Committee on the Total Maximum Daily Load Program*. EPA 100-R-09-8006 (1998).
[4] GAO. *Water Quality: Key EPA and State Decisions Limited by Inconsistent and Incomplete Data* (Washington, DC: 2000), RCED-00-54 and *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*, GAO-02-186 (Washington, DC: 2002)

Sciences Report *Assessing the TMDL Approach to Water Quality Management*[5] and *EPA's Draft Report on the Environment.*[6]

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 National Assessment Database) so that they include documentation of data quality information.

Second, EPA has developed a GIS tool called WATERS that integrates many databases including STORET, the National 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 guidance. The 2006 Integrated Report Guidance (released August 3, 2005 at http://www.epa.gov/owow/tmdl/2006IRG)[7] provides comprehensive direction to states on fulfilling reporting requirements of Clean Water Act sections 305 (b) and 303(d). EPA also issued a 2008 Integrated Report clarification memo (released October 12, 2006; available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html)[8]which includes best practices for timely development/submission of lists and expresses continued commitment to support and populate the Assessment Database (ADB) (State-level system which EPA compiles into the National Assessment Database available via WATERS) and/or compatible data management systems.

Also, the *Consolidated Assessment and Listing Methodology – Toward a Compendium of Best Practices*[9] (released on the Web July 31, 2002 at www.epa.gov/owow/monitoring/calm.html) intended to facilitate increased consistency in monitoring program design and the data and decision criteria used to support water quality assessments.

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[5] Assessing the TMDL Approach to Water Quality Management. 2001. Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction, Water Science and Technology Board, National Research Council

[6] US EPA, *Draft Report on the Environment 2003*. EPA 260-R-02-006 (2003). Available at http://www.epa.gov/indicators/roe/index.htm

[7] USEPA, Office of Water, *2006 Guidance for Assessment, Listing, and Reporting Requirements Pursuant to Sections, 303(d), 305(b), and 314 of the Clean Water Act* (2005). Available at http://www.epa.gov/owow/tmdl/2006IRG

[8] USEPA, Office of Water, *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions* (2006). Available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html

[9] U.S. EPA, Office of Water, *Consolidated Assessment and Listing Methodology- Toward a Compendium of Best Practices.* (Washington, DC: 2002) Available at www.epa.gov/owow/monitoring/calm.html

Fourth, the Office of Water (OW) and EPA's Regional Offices have developed the *Elements of a State Water Monitoring and Assessment Program*, (August 2002).[10] This guidance describes ten elements that each state water quality monitoring program should contain and directs states to develop monitoring strategies that propose time-frames for implementing all ten elements.

In addition, a recent evaluation by the EPA Office of the Inspector General[11] recommended that EPA focus on improving its watershed approach by:

Facilitating stakeholder involvement in this approach,
Better integrating the watershed approach into EPA core programs,
Refining the Agency strategic plan to better evaluate key programs and activities, and
Improving the measurement system by which watershed progress is assessed.

Data Limitations: Data may not precisely represent the extent of impaired waters because states do not employ a monitoring design that monitors all their waters. States, territories and tribes collect data and information on only a portion of their water bodies. States do not use a consistent suite of water quality indicators to assess attainment of 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. These variations in state practices limit how the CWA Sections 305(b) reports and the 303(d) lists provided by states can be used to describe water quality at the national level. There are also differences among sampling techniques, and standards.

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. States, territories, and authorized tribes monitor to identify problems and typically lag times between data collection and reporting can vary by state.

Also, as noted above under Methods, Assumptions and Suitability, States exercise considerable discretion in using monitoring data and other available information to make decisions about which waters meet their designated uses in accordance with state water quality standards. EPA then aggregates these various State decisions to generate national performance measures.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The Office of Water has been working with states to improve the guidance under which 303(d) lists are prepared. EPA issued new listing guidance entitled *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections*

[10] USEPA, Office of Water, *Elements of a State Water Monitoring and Assessment Program*, EPA 841-B-03-003 (Washington, DC: 2003). Available at http://www.epa.gov/owow/monitoirng/repguide.html

[11] USEPA Office of the Inspector General, *Sustained Commitment Needed to Further Advance the Watershed Approach* (2005). Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

303(d) and 305(b) of the Clean Water Act during summer 2005. The Guidance is a comprehensive compilation of relevant guidance EPA has issued to date regarding the Integrated Report. There are a few specific changes from the 2004 guidance. For example, the 2006 Integrated Report Guidance provides greater clarity on the content and format of those components of the Integrated Report that are recommended and required under Clean Water Act sections 303(d), 305(b), and 314. The guidance also gives additional clarity and flexibility on reporting alternatives to TMDLs for attaining water quality standards (e.g., utilization of reporting Category 4b).

EPA released *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions* in October 2006 18 months in advance of the April 2008 Integrated Report due date. The primary goal of the 2008 memo is to help achieve 100 percent on-time submittals of the Integrated Reports (all 56 states and territories by April 1, 2008). Timely submittal and EPA review of Integrated Reports is important to demonstrate state and EPA success in accomplishing Strategic Plan goals for restoring and maintaining water quality.

EPA is also combining the National TMDL Tracking System and the National Assessment Database into one integrated system (the Assessment, TMDL Tracking, and Implementation System) that tracks the status of all assessed waters and waterbody impairments, including impaired waterbodies. EPA is also in the process of releasing the Water Quality Exchange (WQX) which provides data warehousing capability to any organization that generates data of documented quality and would like to contribute that data to the national WQX data warehouse so that their data may be used in combination with other sources of data to track improvements in individual watersheds. Currently data providers must transmit data and required documentation through their own Central Data Exchange (CDX) node. In 2008, EPA plans to make a web data entry tool available for users who have not invested in the CDX node.

References:

USEPA, Office of Water. 2006. Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. Available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html,

USEPA, Office of Water. 2005. Draft Handbook for Developing Watershed Plans to Restore and Protect Our Waters. Available at http://www.epa.gov/owow/nps/watershed_handbook/.

USEPA, Office of the Inspector General. 2005. *Sustained Commitment Needed to Further Advance the Watershed Approach*. Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

USEPA, Office of Water. 2005. *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act.* Available at http://www.epa.gov/owow/tmdl/2006IRG.

USEPA, Office of the Chief Financial Officer. 2003. *2003-2008 Strategic Plan: Direction for the Future*. Available at http://www.epa.gov/ocfo/plan/2003sp.pdf.

USEPA. 2003. *Draft Report on the Environment 2003*. EPA 260-R-02-006. Available at http://www.epa.gov/indicators/roe/index.htm.

USEPA, Office of Water. 2003. *Elements of a State Water Monitoring and Assessment Program.* EPA 841-B-03-003. Washington, DC. Available at http://www.epa.gov/owow/monitoring/repguid.html.

USEPA, National Advisory Council for Environmental Policy and Technology. 1998. *Report of the Federal Advisory Committee on the Total Maximum Daily Load Program*. EPA 100-R9-8006.

USEPA. 2002. *Consolidated Assessment and Listing Methodology – Toward a Compendium of Best Practices.* Washington, DC. Available at http://www.epa.gov/owow/monitoring/calm.html.

Government Accountability Office. 2002. *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify its Most Polluted W*aters. GAO-02-186. Washington, DC.

Government Accountability Office. 2000. *Water Quality: Key EPA and State Decisions Limited by Inconsistent and Incomplete Data*. GAO-RCED-00-54. Washington, DC.

National Research Council, Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction. 2001. *Assessing the TMDL Approach to Water Quality Management.* Washington, DC: National Academy Press.

FY 2009 Performance Measures:

- **Number of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy (cumulative) [PART annual measure]**
- **Number of TMDLs that are established by States and approved by EPA [State TMDLs] on a schedule consistent with national policy (cumulative) [PART annual measure]**

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

Note: Because a TMDL is a plan for attaining water quality standards, the terms 'approved' and 'established' refer to the completion of the TMDL itself and not necessarily its implementation.

Performance Database: The Assessment and Total Maximum Daily Load (TMDL) Tracking And ImplementatioN System (ATTAINS) is a database which will capture water quality information related to this measure. This database is an upgrade to the existing National TMDL Tracking System (NTTS). ATTAINS will be an integrated system capable of documenting and managing the connections between state assessment and listing decisions reported under sections 305(b) and 303(d) (i.e., integrated reporting) and completed TMDL information. This system will allow seamless access to all information about assessment decisions and restoration actions across reporting cycles and over time until water quality standards are attained. Watershed Assessment Tracking Environmental Results System (WATERS– found at http://www.epa.gov/waters/) is EPA's approach for viewing water quality information related to these measures. TMDL information (found at http://oaspub.epa.gov/waters/national_rept.control) is used to generate reports that identify waters for which EPA has approved state-submitted TMDLs and for which EPA has established TMDLs. Annual TMDL totals, spanning 1996 to the present, are available from ATTAINS on a fiscal year basis. As TMDLs and other watershed-related activities are developed and implemented, water bodies which were once impaired will meet water quality standards. Thus these TMDL measures are closely tied to the PART measure, "Number of water body segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained." Newly attaining water bodies will be removed from the list of impaired water segments.

Data Source: State-submitted and EPA-approved TMDLs and EPA-established TMDLs are the underlying data for these measures. Electronic and hard copies are made available by states and often linked to EPA Web sites. More specifically, WATERS allows search for TMDL documents at http://www.epa.gov/waters/tmdl/tmdl_document_search.html.

Methods, Assumptions, and Suitability: State and EPA TMDLs are thoroughly and publicly reviewed during their development. Upon approval by EPA, relevant information from each TMDL is entered into the ATTAINS by EPA Regional staff.

QA/QC Procedures: QA/QC of data is provided by EPA Regional staff and through cross-checks of WATERS information regarding impaired water listings, consistent with the Water Quality Management Plan (QMP). EPA requires that organizations prepare a document called a QMP that: documents the organization's quality policy; describes its quality system; and identifies the environmental programs to which the quality system applies (e.g., those programs involved in the collection or use of environmental data).

Data Quality Review: Internal reviews of data quality have revealed some inconsistencies in the methodology of data entry between EPA Regional Offices. In 2005 and 2006, EPA convened a meeting of NTTS users to discuss how to improve the database. As a result, data field definitions were clarified, the users' group was reinstituted, several training sessions were scheduled, and an ATTAINS design team is currently directing the database upgrades. One of the issues raised included the methodology used to count TMDLs. Previous methodology generated a TMDL "count" based on the causes of impairment removed from the 303(d) impaired waters list as well as the TMDL pollutant. EPA proposed to change the counting methodology to directly reflect only the pollutants given allocations in TMDLs. During a recent EPA Office of the Inspector General review they concurred with this recommendation. This proposed change was vetted during the TMDL Program's annual meeting in March 2007 and implemented in August 2007, resulting in a cumulative net reduction of 1,577 TMDLs. Current realization of targets shows the TMDL Program continues to attain PART and Strategic Plan targets despite the adjustment to the counting methodology.

Data Limitations: To meet the increasing need for readily accessible CWA information, EPA is both upgrading the current database and overseeing quality review of existing data. In the process of developing the new database existing data entry requirements and procedures are being reevaluated and communicated with data entry practitioners. Data quality has been improving and will continue to improve during this overhaul.

Error Estimate: No error estimate is currently available for these data.

New/Improved Data Systems: See above.

References:

USEPA, Office of the Inspector General. 2007. *Total Maximum Daily Load Program Needs Better Data and Measures to Demonstrate Environmental Results.* Available at http://www.epa.gov/oig/reports/2007/20070919-2007-P-00036.pdf.

USEPA, Office of the Inspector General. 2005. *Sustained Commitment Needed to Further Advance the Watershed Approach.* Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

National Research Council, Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction. 2001. *Assessing the TMDL Approach to Water Quality Management.* Washington, DC: National Academy Press.

Link to TMDL report data can be found at: http://www.epa.gov/owow/tmdl/

Link to the Watershed Assessment Tracking Environmental Results System (WATERS) can be found at: http://www.epa.gov/waters/tmdl/expert_query.html

FY 2009 Performance Measures:

- **Percentage of major dischargers in Significant Noncompliance at any time during the fiscal year (PART measure)**
- **Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards (PART measure)**

Performance Databases: The Permit Compliance System, (PCS) tracks permit compliance and enforcement data for sources permitted under the Clean Water Act National Pollutant Discharge Elimination System (NPDES). Data in PCS include major permittee self reported data contained in Discharge Monitoring Reports (DMR), data on permittee compliance status, data on state and EPA inspection and enforcement response.

Data Source: Permittee self reported DMR data are entered into PCS by either state or EPA Regional offices. PCS automatically compares the entered DMR data with the pollutant limit parameters specified in the facility NPDES permit. This automated process identifies those facilities which have emitted effluent in excess of permitted levels. Facilities are designated as being in Significant Noncompliance (SNC) when reported effluent exceedances are 20% or more above permitted levels for toxic pollutants and/or 40% or more above permitted levels of conventional pollutants. PCS contains additional data obtained through reports and on-site inspections, which are used to determine SNC, including: non-effluent limit violations such as unauthorized bypasses, unpermitted discharges, and pass through of pollutants which cause water quality or health problems; permit schedule violations; non-submission of DMRs; submission of DMRs 30 or more days late; and violation of state or federal enforcement orders.

Methods, Assumptions and Suitability: There are established computer algorithms to compare DMR effluent data against permitted effluent levels. The algorithms also calculate the degree of permitted effluent exceedance to determine whether toxic/conventional pollutant SNC thresholds have been reached.

QA/QC Procedures: Quality Assurance/Quality Control procedures [See references] are in place for PCS data entry. State and regional PCS data entry staff are required to take PCS training courses [See references]. Quality Management Plans (QMPs) are prepared for each Office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance (OC) has established extensive processes for ensuring timely input, review and certification of PCS information. OC=s QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008.

Data Quality Review: Information contained in PCS is required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. SNC data in PCS are reviewed quarterly.

Data Limitations: Legal requirements for permittees to self report data on compliance with effluent parameters in permits generally results in consistent data quality and accuracy. EPA monitors and measures the timeliness of DMR submissions and data entry quality. National trends over the past several years show an average of 94% of DMRs is entered timely and complete. Where data entry problems are observed, OECA works directly with regions and states to improve performance, and in limited circumstances has dedicated supplemental grant resources to help regions and states correct problems. As part of ICIS-NPDES implementation OECA is working to deploy an electronic DMR process to save resources on data entry workload and reduce data input errors.

Error Estimate: Not available

New & Improved Data or Systems: PCS was developed during the 1980s and has undergone periodic revision and upgrade since then. OECA is currently developing a modernized data system to replace PCS, utilizing modern data entry, storage, and analytical approaches. The replacement of PCS with ICIS-NPDES (Integrated Compliance Information System – NPDES), a modernized and user-friendly NPDES data system, began in June 2006 when eleven states began using the system; seven other states will be migrated to the new system in August. During phased implementation of ICIS-NPDES across the states a combination of PCS and ICIS-NPDES will be used to generate SNC data. Once fully implemented, ICIS-NPDES will be the sole source of NPDES SNC data.

References:

PCS information is publicly available at: http://www.epa.gov/compliance/planning/data/water/pcssys.htm

FY 2009 Performance Measures:

- **Percentage of States and Territories that within the preceding three year period submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other sources not considered in the previous standards. [PART measure]**
- **Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA [PART measure]**

Performance Database: The Water Quality Standards Action Tracking Application (WATA), an internal tracking application managed by the Office of Science and Technology described at http://intranet.epa.gov/ost/div/shpd/wata-manual.pdf, is the performance database for these measures. The information in this system provides the baseline and performance data for these measures.

Data Source: The underlying data sources for this measure are submissions from states and territories of water quality standards to EPA pursuant to the Clean Water Act and EPA's water quality standards regulation at 40 CFR Part 131. States and territories are required to review their water quality standards at least once every three years and submit any new or revised water quality standards to EPA for review and approval. Each submission is accompanied by a letter from an appropriate official, and includes a certification by the state or territorial attorney general that the standards were duly adopted pursuant to state or territorial law.

EPA Regional Office staff members compile information from each submission and enter it into the WATA system. The information includes identifying data (name of jurisdiction, date of submission), data concerning components of the submission, and data concerning EPA's action on the submission. EPA has delegated approval and disapproval decisions to the Regional Administrator; the Regional Administrator may re-delegate the decisions to the appropriate Division Director, but no further. Approval decisions are judicially reviewable, and are accompanied by an appropriate administrative record.

Methods and Assumptions:

The Office of Science and Technology has established computation metrics in the Water Quality Standards Action Tracking Application (WATA) system to produce the baselines and performance data for both measures. These metrics are as follows:

- Percentage of State and Territorial water quality standards submissions (received in the 12 month period ending April 30th of the fiscal year) that are approved by EPA. Partial approvals receive fractional credit.

This metric considers all new or revised submissions from May 1 of the previous year through April 30 of the current year. This reporting period provides regions at least five months to reach and document a valid approval decision. EPA management believes this is an adequate time for processing submissions. A "submission" is determined by the submitting jurisdiction, as described above. The metric then searches for whether the Regional Office has made any approval decision concerning the submission. If EPA approves the submission in full by the end of the reporting period, it will be counted with an approval value of 1. If EPA disapproves all provisions of the standards, it will be counted with an approval value of 0 (zero). In some cases the Regional decision official may decide to approve some portions of the standards provisions, disapprove some portions, or defer actions on some portions. To accommodate these possibilities, and to reflect the complex nature of some submissions, the WATA system allows Regional staff to track portions of a submission as separate parts with weights corresponding to the number of actual provisions involved. When different decisions are reached on different parts or provisions of a submission, the metric calculates a fractional approval value. The fractional approval value is a number between 0 and 1, equal to the number of provisions

approved, divided by the total number of provisions in the original submission. For example, if a submission contains 10 provisions and EPA approves 8 and disapproves 2, then the metric would count this as 0.8 submissions. The final performance metric is the sum of full or fractional approval values divided by the total number of submissions during the reporting period.

- Number of States and Territories that within the preceding three year period submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other sources not considered in the previous standards

This measure utilizes a Regional Office entry in the WATA system which indicates whether a submission or submission part includes one or more new water quality criteria or revised criteria that reflect new scientific information from EPA or other sources not considered in the previous criteria. Biological criteria that are reflected explicitly in designated uses would count under this entry. If a state or territory has not adopted any such criteria, the jurisdiction can nevertheless be counted under this measure if (a) EPA has issued new or revised water quality criteria, including revisions to the published table of EPA recommended criteria at http://www.epa.gov/waterscience/criteria/wqcriteria.html, but the state has determined through a scientific assessment that such a change is not relevant for its waters, or (b) the jurisdiction could certify to EPA that it has completed a defensible scientific review of the new scientific information EPA has issued and has determined that no changes are needed to their existing water quality criteria. The metric searches for one or more qualifying submissions or submission parts for each jurisdiction during the three-year period ending five months before the end of the reporting period, and that have been approved by EPA by the end of the reporting period. For example, for FY 2009 any qualifying submissions from May 1, 2005, through April 30, 2009, that were approved by September 30, 2009, would enable the jurisdiction to be counted. Note the overlap from one reporting year to the next: a state that last made such a submittal, in, say, February 2005, would be counted in FY 2005, FY 2006, and FY 2007 but not in FY 2008 or FY 2009.

Suitability: These two performance measures provide important information about how well EPA and states/territories are carrying out their respective roles and responsibilities for establishing and approving up-to-date scientifically defensible WQS. The first measure describes how well EPA and states/territories are working together to set revised WQS that EPA can approve in a timely fashion. The second measure provides an indicator of how well states' WQS reflect latest scientific data.

QA/QC Procedures: States and territories conduct QA/QC of water quality standards submissions pursuant to individual state procedures. Because such submissions are subject to judicial review, the attorney general's certification described above provides assurance of the content of each submission. EPA regional staffs provide support to and interact with the jurisdictions as they develop, review, and adopt water quality standards. Each Regional Office

provides data quality review of its entries in the WATA system. For example, Regional Offices generally assure that each entry is reviewed by the water quality standards coordinator, usually a senior scientist or environmental protection specialist with extensive experience in water quality standards actions. Data validation algorithms built into each entry screen also help improve data quality. In addition, a sample of entries is spot-checked by Headquarters' Office of Science and Technology staff. The Regions and Headquarters have been able to conduct the data quality reviews fairly easily because the number of submissions has averaged about 50 submissions per year in recent years, well within their available resources to provide adequate review.

Data Quality Review: No external reviews of the data have been conducted.

Data Limitations: Submissions may vary considerably in size and complexity. For example, a submission may include statewide water quality standards revisions, use attainability analyses for specific water bodies, site-specific criteria applicable to specific types of waters, general statewide policies, antidegradation policies or procedures, and variances. Therefore, these measures – the number of submissions approved, and the number of jurisdictions with updated scientific information contained in adopted standards – do not provide an indicator of the scope, geographic coverage, policy importance, or other qualitative aspects of water quality standards. This information would need to be obtained in other ways, such as by reviewing the content of adopted and approved standards available at http://www.epa.gov/waterscience/standards/wqslibrary/, or contacting the appropriate Regional Office or state/territorial personnel.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The Office of Science and Technology is planning to enhance the existing WATA system to improve its capabilities and data quality.

References:

USEPA. September 13, 2006. *Water Quality Standards Acting Tracking Application: Users Manual.* Available at http://intranet.epa.gov/ost/div/shpd/wata-manual.pdf.

USEPA. 2000. *Water Quality Standards Regulation.* Code of Federal Regulations, 40 CFR part 131. Available at http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr131_05.html.

USEPA. August 1994. *Water Quality Standards Handbook,* 2nd edition. http://www.epa.gov/waterscience/standards/handbook/.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Estimated annual reduction of nitrogen (millions of pounds), phosphorous (millions of pounds), and sediment (tons) from nonpoint sources to waterbodies. [PART Annual Measure]**

Performance Database: The Section 319 Grants Reporting and Tracking System (GRTS) is used by grant recipients (State agencies) to supply information about State NPS Management Programs and annual Section 319 funded work programs, which include watershed-based BMP implementation projects. GRTS includes information about Best Management Practices (BMPs) implemented under 319-funded watershed projects, and the NPS load reductions achieved as a result of implementation. EPA uses GRTS to compile and report information about state section 319 program projects, including load reductions for nitrogen, phosphorus, and sediment.

State reporting via GRTS in part fulfills requirements of the Clean Water Act (CWA) Sections 319(h)(11) and 319(m)(1); however, GRTS also provides EPA and other stakeholders greater and more efficient access to data, information, and program accomplishments than would otherwise be available. Besides load reduction information, GRTS, in conjunction with WATERS (see below) provides detailed georeferencing (i.e., National Hydrography Dataset – or "NHD"-- reach addresses) for 319-funded projects, project cost information, and a host of other elements.

GRTS is also part of the Watershed Assessment, Tracking, and Environmental Results System (WATERS), which is used to provide water program information and display it spatially using a geographic information system integrated with several existing databases. These databases include the STOrage and RETrieval (STORET) database, the National Assessment Database (NAD), the TMDL Tracking System (NTTS), the Water Quality Standards Database (WQSDB), and GRTS.

Data Source: States enter load reduction data for individual 319-funded projects into GRTS. Various watershed models are used in the States to estimate the load reductions resulting from implementation of BMPs. Two models used by many states, and directly supported by EPA, are the Spreadsheet Tool for Estimating Pollutant Loads (STEPL) model, and the "Region 5" model. States, at their discretion, may use other models or methods (e.g., AGNPs, SWAT, GWLF, etc), or may use actual water monitoring data to generate estimates of pollutant load reduction resulting from BMP implementation. The load reduction data generated by modeling and/or monitoring efforts are entered by State staff directly into the appropriate GRTS data fields.

Methods, Assumptions and Suitability: States employ two main methods to make pollutant load reduction estimates for the purpose of entering information into GRTS: 1) watershed models to estimate load reductions after watershed project BMPs are implemented, and 2) direct sampling over time of pollutants using targeted site selection. Even direct sampling methods,

however, usually involve some type of modeling to separate BMP effects from other variables when determining load reductions.

EPA aggregates the load reduction data entered into GRTS to generate the national load reduction number for each pollutant. With each successive time period – each of which includes load reduction estimates from projects funded under more than one fiscal year grant (since BMPs are still "working" for some time after initial installation) -- the total from the previous period is subtracted from the total of the current time period to get the incremental total. For example, our first report on national load reduction numbers in the PART included projects funded from FY 2002 and most of FY 2003 (FY 2002 was the first grant year for which load reduction information was mandated). For the next report in PART, we totaled load reductions for projects from FY 2002 through 2004, with a smattering of projects for FY 2005 for which information was available in GRTS. The total from the first time around was subtracted from this latter total to give us the increment. This increment is what we reported in OMB's Program Assessment Rating Tool (PART) in November 2005.

This method of determining the increment has been necessary because of the particular structure and previous software used for GRTS, which houses projects by grant year. A project funded in a single grant year is usually implemented over several years. Within a single project form, the load reduction number (or numbers if more than one watershed is being addressed by the project) is updated at least annually, but there is no requirement to keep the "original" load reduction number in the system. Therefore, we did not always have a record of how load reductions have increased over time for a given project; hence, we use the method described above to estimate the national load reduction increment from one time period to the next.

QA/QC Procedures: QA/QC of load reduction estimates generated by states is dependent on individual state procedures, such as state Quality Management Plans (QMPs), which are periodically reviewed and approved by EPA Regions.

EPA provides user support and training to states in the use of the STEPL and Region 5 models. EPA emphasizes that Quality Assurance Project Plans (QAPPs) should be developed (in accordance with EPA approved State QMPs) for watershed projects, especially where water quality models are being used or where monitoring is being conducted. EPA also stresses that site-specific parameters be used whenever possible for input to water quality models, as opposed to default input values provided by some modeling tools.

States have continual access and opportunity to review the information in GRTS to ensure it accurately reflects the data they entered (according to their QA procedures). EPA periodically reviews GRTS and reminds states of the critical importance of their completing mandated data elements in a timely, high-quality manner.

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: Data entered in GRTS are periodically reviewed by EPA Regions and Headquarters. Regional personnel also maintain hardcopies of the states work programs, watershed project implementation plans, and Annual Progress Reports. Verification of data in GRTS can be cross-checked with these documents to ensure quality, consistency, and reliability in progress reporting on an incremental (such as, year-to-year) basis, or to note any problems in data quality in GRTS. EPA frequently reviews various aggregation(s) of all the data in GRTS by our use of "ad-hoc" and standard reports available in the GRTS reporting system.

In the past, Nonpoint Source Program reporting under Section 319 had been identified as an Agency-level weakness under the Federal Managers Financial Integrity Act. The Agency's establishment and subsequent enhancements of GRTS has served to mitigate this problem by requiring states to identify the activities and results of projects funded with Section 319(h). In response to the FMFIA evaluation, EPA has been working with states and other stakeholders to improve data input and quality. We sponsor national GRTS-users group meetings each year. These meetings serve not only to meet the training needs of the user community, but also provide a forum for discussing needed enhancements to GRTS. These enhancements range from better capturing environmental results to improving consistency of data entry to facilitate state-by-state comparisons.

The CWA Sections 319(h)(11) and 319(m)(1) require States to report their Nonpoint Source Management Program (NPSMP) milestones, nonpoint source pollutant load reductions, and water quality improvements. These sections provide the EPA Office of Water (OW) authority to require water quality monitoring and/or modeling, and to require reporting by states to demonstrate their success in reducing nonpoint source pollutant loads and improving water quality. OW has issued several guidance documents designed to improve state NPSMPs, watershed-based projects, and consistency in state progress reporting, including their use of GRTS. In September 2001, EPA issued "Modifications to Nonpoint Source Reporting Requirements for Section 319 Grants." This memorandum outlines the process for reporting in GRTS load reductions for nutrients and sediment (for applicable Section 319(h) funded projects). Our current "National Nonpoint Source Program and Grants Guidelines" (October, 2003) includes sections on all nonpoint source grant reporting requirements, including GRTS reporting. Furthermore, EPA, in consultation with the States, has established the nonpoint source program activity measures (PAMs) -- including nonpoint load reductions -- which are now part of EPA's Strategic Plan and the PART. We have also communicated (e.g., via email) to states further detailed explanations of the NPS program activity measures, expected reporting sources and dates, and results of our reviews of data input to GRTS by the States.

Data Limitations: State NPSMP work to model (and monitor) watersheds is often not integrated or coordinated with state water quality monitoring and assessment strategies, and therefore use of the data may be rather limited. Load reduction data are typically generated from the use of water quality models, and there is a great deal of uncertainty in model inputs and

outputs. States generally do not apply model results to decision–making for implementing and/or revising their NPS Management Programs.

State assessments of load reductions and water quality typically include uncertainties associated with any measuring or modeling tools. Variability in the environment, as well as in state methods and application of tools limit the accuracy of data for describing load reductions and water quality at the project level. Aggregating the load reduction data up to the national measure compounds the level of uncertainty, thereby preventing the Agency from assigning a reasonable numerical confidence level to it.

Error Estimate: No error estimate is available for these data.

New/Improved Data or Systems: GRTS has recently been converted to an Oracle database. Oracle is the standard database used by Federal agencies. Conversion to Oracle will allow GRTS to seamlessly connect with WATERS, as well as facilitate potential linkages to a variety of other databases, models, and watershed planning tools. The Oracle-based GRTS will greatly improve reporting capabilities for all end users, and make it easier to quickly answer questions for stakeholders. Questions which will be easier to answer include, "Where are watershed projects being developed and implemented? Are they concurrent with impaired waters and established TMDLs? Do they pursue actions necessary to reduce pollutant loads and attain water quality standards?"

Oracle provides users the capability of customizing data entry screens to facilitate various reporting needs of the States and EPA. We can customize screens to reflect various programmatic needs of Regional offices and States, such as to view only the mandated elements, or a mix of mandated elements and other Regionally-required data fields.

Training on STEPL and the Region 5 model are ongoing in hopes of minimizing operational mistakes for State staff utilizing one or both of these models to estimate section 319 project load reductions.

References: USEPA. *Nonpoint Source Program and Grants Guidelines for States and Territories.* October 23, 2003 (http://www.epa.gov/OWOW/NPS/cwact.html).

USEPA. *Modifications to Nonpoint Source Reporting Requirements for Section 319 Grants.* September 27, 2001 (http://www.epa.gov/OWOW/NPS/cwact.html).

USEPA. GRTS. Grants Tracking and Reporting System. GRTS Web User Guide, Version 1.6 March 15, 2007.

USEPA. WATERS. Watershed Assessment Tracking and Environmental Results. (http://www.epa.gov/waters/).

USEPA. NHDPlus. National Hydrography Dataset Plus (http://www.horizon-systems.com/nhdplus/).

USEPA. STORET. Storage and Retrieval (http://www.epa.gov/storet/dbtop.html).

USEPA. NAD. National Assessment Database (http://www.epa.gov/waters/305b/).

USEPA. WQSDB. Water Quality Standards Database (http://www.epa.gov/wqsdatabase/).

USEPA. STEPL. Spreadsheet Tool for Estimating Pollutant Load (http://it.tetratech-ffx.com/stepl/).

FY 2009 Performance Measures:

- **Percentage of high priority EPA and State NPDES permits that are reissued on schedule (PART Measure)**
- **Percentage of high priority state NPDES permits reissued on schedule (PART Measure)**

Performance Database:

- U.S. EPA. Permit Compliance System (PCS). [database]. Washington, DC [Office of Enforcement and Compliance Assurance]
- U.S. EPA Integrated Compliance Information System (ICIS-NPDES). [database]. Washington, DC [Office of Enforcement and Compliance Assurance]
- Electronic Permit Issuance Forecasting Tool (E-PIFT) [database]. Washington, DC [Office of Water]
- Priority Permits Data Base. [web-based database]. Washington, DC [Office of Water]

EPA has carried out detailed permit renewal backlog tracking with PCS data since November 1998. The Permit Compliance System (PCS) and the Integrated Compliance Information System (ICIS-NPDES) are used to determine which individual permits are current through date fields for permit issuance and expiration. To supplement the individual permit data from PCS, EPA uses the Electronic Permit Issuance Forecasting Tool (E-PIFT) to track the current or expired status of facilities covered under non-storm water general permits. E-PIFT has been used to track non-storm water general permit facilities since January 2001.

In March 2004 a new priority permit issuance strategy was initiated under the Permitting for Environmental Results (PER) program. The priority permits issuance strategy focuses permitting activities on environmentally and administratively significant expired permits. The Priority Permits Database is a web-based system that tracks the specific permits that each State

and Region has identified as priority. States and Regions enter the permits, and EPA HQ uses PCS/ICIS-NPDES to track permit issuance status of these permits.

Data Source: EPA=s Regional offices and NPDES authorized states enter data into PCS and/or ICIS-NPDES and EPA=s Regional offices are responsible for entering data to the E-PIFT. EPA's Regional offices and States also enter permit identification information into the Priority Permits database.

Methods, Assumptions and Suitability: Annually, Office of Wastewater Management (OWM) provides State and Regional authorities with a list of candidate priority permits, defined as permits that have been expired for two years or more. States and Regions then use several programmatic and environmental criteria to select which of those candidate permits should be prioritized for issuance. They then commit to issue these permits over the next two fiscal years, with the goal of achieving a 95% issuance rate. Regions enter their commitments into the Priority Permits Data Base. Results are confirmed using PCS/ICIS-NPDES reports.

QA/QC Procedures: The PCS and ICIS-NPDES databases are managed by the Office of Enforcement and Compliance Assurance (OECA); E-PIFT and Priority Permits Database are web-based systems that are managed by the Office of Water (OW). EPA Headquarters (HQ) staff in OECA review data submitted by states as part of the QA/QC process. In addition, OW continues to work with States and Regions to improve the quality and completeness of the data. EPA generates state-by-state reports that list PCS/ICIS-NPDES Akey data@ fields, including permit issuance and expiration dates, as well as compliance and enforcement data, and provides these lists to NPDES states and Regions for review and cleanup. EPA also created a spread sheet comparing latitude/longitude (lat/long) data for municipal treatment systems collected by the Clean Water Needs Survey to the lat/long data in PCS. This spread sheet is provided to States and Regions so that, where discrepancies exist between state and PCS/ICIS-NPDES data, EPA and States can make corrections in PCS/ICIS-NPDES. EPA will continue to focus on improving the lat/long data in PCS/ICIS-NPDES, especially at the pipe level.

Additionally, where States maintain key permit data in separate state-level systems, EPA is providing support to upload these data to PCS.

Data Quality Review: The Office of Inspector General (OIG) has issued several findings regarding poor PCS data quality, and PCS has been listed as an Agency-Level Weakness under the Federal Managers Financial Integrity Act since 1999. This weakness affects EPA's ability to obtain a true picture of the status of the NPDES program. Fortunately, permit event data such as the permit issuance and expiration data needed for this performance measure are generally better populated than other key data elements. As noted previously, OW is offering support to States for data upload, data entry, and, if necessary, data compilation to improve data quality. This has resulted in improved tracking of data, particularly industrial permits.

The replacement of PCS with ICIS-NPDES, a modernized and user-friendly NPDES data system, began in June 2006 and nineteen states and several territories have successfully migrated to the new system. Use of ICIS-NPDES should greatly increase state participation and data quality. Batch states (those states with their own data systems) will not be migrated to ICIS-NPDES until appropriate mechanisms are in place to transfer the data.

Data Limitations: Priority Permits data are verified and reliable. We are aware of data gaps in PCS in general, particularly for minor facilities, and of discrepancies between state databases and PCS; however, EPA's data clean-up over the past five years has significantly improved data quality. E-PIFT has enabled EPA to report on inventories and status of non-storm water facilities covered by NPDES general permits, but the data are not as comprehensive as those tracked in PCS. In addition, to date, there has been no national-level data system to track permit issuance and expiration status of facilities covered by *stormwater* general permits. In 2007, OWM is planning to improve E-PIFT to enable tracking of stormwater general permits and facilities covered under them.

Error Estimate: We believe that the permit renewal backlog data for major facilities is accurate within 2 percent based on input from EPA's Regional offices and states through a quarterly independent verification. For minor facilities, however, the confidence interval is less precise and probably overestimates the permit renewal backlog for minor facilities by 5 percent based on anecdotal information from EPA's Regional offices and states.

New/Improved Data or Systems: EPA headquarters has been providing contractor assistance to improve the data quality in PCS and will continue to do so. The new modernized ICIS-NPDES was rolled out in June 2006, with nineteen states and several territories now using the system. ICIS –NPDES will be easier to use and will improve the quality of data needed to manage the NPDES program.

References:

Information for PCS and ICIS-NPDES is publicly available at:
http://www.epa.gov/compliance/data/systems/modernization/index.html

FY 2009 Performance Measure:

- **Loading (pounds) of pollutants removed per program dollar expended (PART efficiency measure)**

Performance Database: Data for this measure are derived using different methods for industries subject to effluent guidelines, Publicly Owned Treatment Works (POTWs), municipal storm water and construction storm water (industrial storm water is not included nor are

reductions from water quality based effluent limits). The values derived from these methods are summed to obtain the total pollutant load reductions achieved under the surface water program. To calculate the PART efficiency measure, the total cumulative pollutant reductions are divided by the total number of dollars devoted to the EPA Surface Water Program (SWP), grants to States under Clean Water Act (CWA) section 106, plus State 'match' dollars, annually. SWP and CWA Section 106 budget is pulled from EPA's Integrated Financial Management System (IFMS). State 'match' dollars are reported to EPA by States.

Data Sources: For industry sectors subject to **effluent guidelines,** estimated loading reductions are taken from reductions estimated in the Technical Development Document (TDD) when the effluent guideline is developed. The common components for such analyses include wastewater sampling, data collection from the regulated industry, and some amount of estimation or modeling. TDDs are available for: Pulp & Paper, Pharmaceuticals, Landfills, Industrial Waste Combustors, Centralized Waste Treatment, Transportation Equipment Cleaning, Pesticide Manufacturing, Offshore Oil & Gas, Coastal Oil & Gas, Synthetic Based Drilling Fluid, Concentrated Animal Feeding Operations, Meat and Poultry, Metal Products and Machinery, Aquaculture. States and EPA's Regional offices enter data into PCS and ICIS.

For **Publicly Owned Treatment Works (POTWs)**, trend data is taken from a detailed analysis for BOD and TSS loadings from POTWs in Progress in Water Quality: An Evaluation of the National Investment in Municipal Wastewater Treatment, USEPA, June 2000, EPA-832-R-00-008. The report provides flow estimates, loading estimates and a distribution of treatment class for every 2 to 4 years from 1968 through 1996. In addition, the report uses data from the Clean Watershed Needs Survey (CWNS) to provide projections for 2016. EPA has also prepared a 2004 Update to Progress in Water Quality that uses data from the 2004 CWNS to provide flow and loading estimates for the year 2000 and projections for 2025. The 2004 CWNS is currently at OMB for clearance.

For **Municipal Stormwater,** estimates were derived from EPA models of the volume of storm water discharged from municipal separate storm sewer systems (MS4s) developed as part of a 1997 EPA draft report. The methodology and results of the 1997 draft report are described in Economic Analysis of the Final Phase II Storm Water Rule, EPA, October 1999.[12]

Estimates of the sediment load present in **Construction Stormwater** is derived using a model developed by the US Army Corps of Engineers. The model uses the construction site version of the Revised Universal Soil Loss Equation (RUSLE). Uncontrolled (i.e. prior to implementation of Best Management Practices (BMPs)) and controlled (i.e. after the implementation of BMPs) sediment loadings were estimated for 15 climatic regions with three site sizes (one, three, and five acres), three soil erodability levels (low, medium, and high), three slopes (3%, 7%, and

[12] Economic Analysis of the Final Phase II Storm Water Rule, Oct. 1, 1999, US EPA. Available at: http://www.epa.gov/npdes or http://cfpub.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name

12%), and various BMP combinations. The methodology and results are described in "Economic Analysis of the Final Phase II Storm Water Rule."

Combined Sewer Overflow (CSO) loadings are estimated based on data obtained from the Clean Watershed Needs Survey and from the "Report to Congress on the Impacts and Control of Combined Sewer Overflows and Sanitary Sewer Overflows." States and EPA's Regional offices provide data for the CSO Report to Congress and the Clean Watershed Needs Survey.

Data for the PART denominator, i.e. the total number of dollars devoted to the EPA Surface Water Program (SWP), are assembled and updated as new data becomes available. EPA Surface Water Program funds and CWA Section 106 budget are initially based on the President's Budget until a final budget is adopted; it is then pulled from EPA's Integrated Financial Management System (IFMS). State 'match' dollars are reported to EPA by States; where updated data is not available, the last year of confirmed data is carried forward.

Methods, Assumptions and Suitability: EPA uses the spreadsheet described above to estimate loadings. The data are aggregated across different sources to determine loading reductions at the national level. Loadings appear to be the best surrogate for determining the environmental impacts of point sources. Pollutant load reductions, along with some of the water quality improvement measures, tell the story about environmental outcomes. Pollutant reductions per dollar spent provides a snapshot of the effectiveness and efficiency of the surface water program, and comparing this over time helps to delineate a trend.

QA/QC Procedures: The loadings spreadsheets are based on information from rulemakings and policies that have undergone extensive review. The effluent guidelines follow EPA quality assurance/quality control (QA/QC) procedures.

Data Quality Reviews: The methodology for this measure was submitted to OMB for review during the PART process.

Data Limitations: Loadings data must be modeled rather than measured as there is inconsistent and poor data quality in the PCS data base with respect to flow and discharge monitoring, including missing data for minor facilities which has not been required to be entered. Neither monitoring nor flow data are required for certain categories of general permits. The Agency, therefore, is not able to measure actual loadings reductions for all of the approximately 550,000 facilities that fall under the NPDES program. As a result, loadings estimates are based upon models.

When the ICIS-NPDES Policy Statement is issued, the quality and quantity of Discharge Monitoring Report (DMR) data is expected to improve. This will enable development of improved methods for estimating and validating loading reductions.

Error Estimate: At this time we are unable to estimate error due to the lack of actual national level data to compare to estimates based on models.

New/Improved Data or Systems: EPA continues to evaluate and explore improved methods for calculating loadings reductions nation-wide from all sources.

References:

Clean Watershed Needs Survey 2000 [Electronic data base]. (2000). Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management].

Effluent guidelines development documents are available at: http://www.epa.gov/waterscience/guide.

Modeling databases and software being used by the Office of Water are available at: http://www.epa.gov/water/soft.html

SWP PART Efficiency Measure Spreadsheet [Excel Spreadsheet]. Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management].

FY 2009 Performance Measure:

- **Fund utilization rate for the CWSRF [PART annual measure]**

Performance Database: Clean Water State Revolving Fund National Information Management System (NIMS.)

Data Sources: Data are from reporting by municipal and other facility operators, state regulatory agency personnel and by EPA's regional staff. Data are collected and reported once yearly.

Methods, Assumptions and Suitability: Data entered into NIMS are the units of performance. These data are suitable for year-to-year comparison and trend indication.

QA/QC Procedures: EPA's headquarters and regional offices are responsible for compiling the data and querying states as needed to assure data validity and conformance with expected trends. States receive data entry guidance from EPA headquarters in the form of annual memoranda. A generic memorandum would be titled: "Request for Annual Update of Data for the Clean Water State Revolving Fund National Information Management System, July 1, 200X through June 30, 200X."

Data Quality Reviews: EPA's headquarters and regional offices annually review the data submitted by the states. These state data are publicly available at

http://www.epa.gov/owm/cwfinance/cwsrf in individual state reports. EPA's headquarters addresses significant data variability issues directly with states or through the appropriate EPA regional office. An annual EPA headquarters' "N IMS Analysis" provides detailed data categorization and comparison. This analysis is used during annual EPA regional office and state reviews to identify potential problems which might affect the performance measure, biennial reviews by EPA's headquarters of regional oversight of state revolving funds and, annual reviews by EPA's regional offices of their states' revolving funds operations.

State data quality is also evaluated during annual audits performed by independent auditors or by the appropriate regional office of the EPA Inspector General. These audits are incorporated into EPA headquarters' financial management system.

Data Limitations: There are no known limitations in the performance data, which states submit voluntarily. Erroneous data can be introduced into the NIMS database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields have been virtually eliminated in the past two years as a result of EPA headquarters' clarification of definitions. These definitions are publicly available at: http://www.epa.gov/owm/cwfinance/cwsrf. There is typically a lag of approximately two months from the date EPA asks states to enter their data into the NIMS database, and when the data are quality-checked and available for public use.

Error Estimate: Due to the rapid growth of this program, past estimates of annual performance (relative to a target), compared to actual performance data received two years later, have been accurate to an average of approximately plus or minus2 percentage points.

New/Improved Data or Systems: This system has been operative since 1996. It is updated annually, and data fields are changed or added as needed.

References:
State performance data as shown in NIMS are available by state at:
http://www.epa.gov/owm/cwfinance/cwsrf
Definitions of data requested for each data field in NIMS is available at:
http://www.epa.gov/owm/cwfinance/cwsrf
The Office of Water Quality Management Plan, July 2001 (approved September 28, 2001) addresses the quality of data in NIMS. Not publicly available.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Number of waterbodies restored or improved per million dollars of CWSRF assistance provided. (PART efficiency measure)**
- **Number of waterbodies protected per million dollars of CWSRF assistance provided. (PART efficiency measure)**

Performance Databases: Clean Water State Revolving Fund Benefits Reporting (CBR) Database

CBR contains state-by-state data on the environmental benefits achieved by each loan made by the 51 state CWSRFs. CBR is a new database and therefore does not contain data on all CWSRF loans since the inception of the program. CBR contains complete data on all loans made from capitalization grants received after January 1, 2005. Some states have chosen to report the environmental benefits of loans made from earlier capitalization grants. Data is entered into CBR by states on a rolling basis; however, states must enter all loans for a given fiscal year by the end of the state fiscal year. As of July 2007, the environmental benefits of $13.4 billion in CWSRF assistance had been reported in the CBR.

CBR contains general information about each loan, including borrower, loan execution date, loan amount, repayment period and interest rate. Data on the environmental benefits of each loan include population served, wastewater volume, needs categories addressed, discharge information (i.e. ocean, surface water, groundwater, etc), permit type/number (if applicable), affected waterbody name and ID number, and affected waterbody status (impaired or meeting standards). CBR also collects information on whether each loan helps a system to achieve or maintain compliance, and whether it contributes to water quality improvement or maintenance. The designated uses of the waterbody are identified, as well as whether the loan contributes to protection or restoration of each designated use.

Data Sources: State regulatory agency personnel report and enter data into the CBR database on a rolling basis, based on state fiscal year.

Methods, Assumptions and Suitability: Data entered into CBR directly represent the units of performance for the performance measure. Data collected in the CBR database is suitable for calculating these performance and efficiency measures.

QA/QC Procedures: EPA regional offices are responsible for assuring state personnel enter all data by the end of the state fiscal year. States receive data entry guidance from EPA headquarters in the form of data definitions, available online at: http://12.170.50.10/cwbenefits/login.aspx by clicking on the "help" menu in the top right corner of the screen.

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: Quarterly checks of the data are performed by EPA's contractor to ensure that states are entering data in a manner consistent with data definitions. Headquarters addresses significant data variability issues directly with states.

Data Limitations: Erroneous data can be introduced into the CBR database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields are minimized as a result of EPA headquarters' clarification of definitions. Data is entered into the system on a rolling basis due to variations in state fiscal years. This new database has been in operation for approximately one year. As a result, comprehensive data is not available for all states for years prior to 2005.

Error Estimate: As this is a new database, an error estimate is not available at this time.

New & Improved Data or Systems: This system has been operative since 2005. Data fields are changed or added as needed.

References:
Definitions of data requested for each data field in the CBR database are available at: http://12.170.50.10/cwbenefits/login.aspx by clicking on the "help" menu in the top right corner of the screen.

FY 2009 Performance Measures:

- **Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal. [PART annual measure]**
- **Number of homes that received improved service per $1,000,000 of State and Federal funding. [PART efficiency measure]**

Performance Database: Sanitation Tracking and Reporting System (STARS), managed by the Indian Health Service (IHS), Office of Environmental Health and Engineering (OEHE), Division of Sanitation Facilities Construction (DSFC). This database has been modified to include information on water and wastewater projects in rural Alaska communities and Alaska Native Villages (ANVs).

Data Sources: The STARS includes data on sanitation deficiencies, Indian homes and construction projects. STARS is currently comprised of two sub-data systems, the Sanitation Deficiency System (SDS) and the Project Data System (PDS).

Methods, Assumptions and Sustainability: The SDS is an inventory of sanitation deficiencies for Indian and rural Alaska homes, ANVs and communities. It is updated annually. The

identification of sanitation deficiencies can be made several ways, the most common of which follow:

- Consultation with Tribal members, community members and other Agencies
- Field visits by engineers, sanitarians, Community Health Representatives (CHRs) nurses, State of Alaska IHS or tribal heath staff
- PWSS Sanitary Surveys
- Tribal Master Plans for Development
- Telephone Surveys
- Feasibility Studies

The most reliable and preferred method is a field visit to each community to identify and obtain accurate numbers of homes with sanitation deficiencies. The number of Indian homes within the communities must be consistent among the various methods cited above. If a field visit cannot be made, it is highly recommended that more than one method be used to determine sanitation deficiencies to increase the accuracy and establish greater credibility for the data.

The PDS is a listing of funded construction projects and is used as a management and reporting tool. The PDS supports the annual calculation of the program efficiency measure.

QA/QC Procedures: Quality assurance for the Indian country water quality performance measure depends on the quality of the data in the STARS. The STARS data undergo a series of quality control reviews at various levels within the IHS and the State of Alaska.

Data Quality Reviews: The SDS data undergo a series of highly organized reviews by experienced tribal, IHS field, IHS district, State of Alaska and IHS area personnel. The data quality review consists of performing a number of established data queries and reports, which identify errors and/or inconsistencies. In addition, the top SDS projects and corresponding community deficiency profiles for each area are reviewed against their budgets. Detailed cost estimates are required for the review.

Data Limitations: The data are limited by the accuracy of reported data in STARS.

Error Estimate: The higher-level projects (those with the possibility of funding prior to the next update) must be developed to allow for program implementation in an organized, effective and efficient manner. Those SDS projects (top 20%) must have cost estimates within 10% of the actual costs.

New/Improved Data or Systems: The STARS is a web-based application and therefore allows data to be continuously updated by personnel at various levels and modified as program requirements are identified. PDS has been modified to meet 40CFR31.40 reporting requirements. In 2007 the STARS application will be modified so that STARS' administrators can allow specific users to access their relevant portions of the STARS database.

References:

1. Indian Health Service (IHS), Division of Sanitation Facilities (DSFC). Criteria for the Sanitation Facilities Construction Program, June 1999, Version 1.02, 3/13/2003. http://www.dsfc.ihs.gov/Documents/Criteria_March_2003.cfm

2. Indian Health Service (IHS), Division of Sanitation Facilities (DSFC). Sanitation Deficiency System (SDS), Working Draft, "Guide for Reporting Sanitation Deficiencies for Indian Homes and Communities", May 2003. http://www.dsfc.ihs.gov/Documents/SDSWorkingDraft2003.pdf

FY 2009 Performance Measure:

- **Percent of active dredged material ocean dumping sites achieving environmentally acceptable conditions (as reflected in each site's Site Management Plan)**

Performance Database: Data for this measure are entered into EPA's Annual Commitment System (ACS) database by those EPA Regional offices (Regions) responsible for the management and oversight of dredged material ocean dumping sites. This performance measure, which is a target in the 2006-2011 Strategic Plan, will be tracked on an annual basis as a management tool for the ocean dumping program. The baseline year for the measure is 2005.

Data Source: EPA's Regional offices are responsible for data collection and management. Under section 102 of the Marine Protection, Research, and Sanctuaries Act (MPRSA), EPA Regions may designate ocean sites for the disposal of dredged material. The Act requires that each site have a Site Management and Monitoring Plan (SMMP), which includes, but is not limited to, a baseline assessment of the conditions at the site, a program for monitoring the site, and management practices at the site to protect the aquatic environment. Each SMMP is unique to the dump site and is developed in conjunction with all relevant stakeholders. The SMMP generally defines monitoring requirements, the conditions under which a site is deemed to be environmentally acceptable, and triggers for corrective action. Based on the requirements of each SMMP, the responsible Regions may conduct monitoring surveys of the dump sites to determine benthic impacts, spatial distribution of dredged material, characterize physical changes to the seafloor resulting from disposal, pH, turbidity, and other water quality indicators. Utilizing sampling results (as necessary), EPA Regions determine if a site is achieving environmentally acceptable conditions.

Methods, Assumptions and Suitability: As each SMMP defines the required monitoring and environmentally acceptable conditions for an ocean dumping site, any survey/sampling methodologies and assumptions will be site-specific. However, if a Region utilizes EPA's Ocean Survey Vessel (OSV) *Bold*, established procedures for use of the equipment and handling

samples on the OSV *Bold* must be followed. In addition, for each survey the Region is required to submit to Headquarters a survey plan that presents types of sampling techniques, including equipment used, and how data are recorded. These data are highly suitable for tracking the performance of this measure, as they are collected for the specific purpose of determining the environmental conditions of the dredged material ocean dump sites. The periodicity of monitoring is determined by the SMMP, and is suitable for tracking this measure.

QA/QC Procedures: Regions must develop a Quality Assurance Project Plan (QAPP), as prescribed by their regional quality assurance procedures, when collecting data at an ocean dumping site. These QAPPs are also submitted to Headquarters when a Region utilizes the OSV *Bold* for a sampling survey. The QAPP outlines the procedures for collection methods, use of analytical equipment, analytical methods, quality control, and documentation and records.

Data Quality Reviews: Regions must conduct data quality reviews as determined by their quality assurance procedures and included in their QAPPs.

Data Limitations: It is still early to determine the full extent of data limitations.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: Initial reporting in FY 2007 did not indicate that any improvements to the collection and/or evaluation of data to support the measure were needed.

References: The Annual Commitment System is an internal EPA database that is a component of the Agency's Budget Automation System (BAS). EPA's Oceans and Coastal Protection Division has prepared a template for the Regions to use when preparing survey plans. QAPPs for those Regions responsible for ocean dumping sites may be found at the following internet sites:
EPA Region 1 - http://www.epa.gov/ne/lab/qa/pdfs/QAPPProgram.pdf
EPA Region 2 - http://www.epa.gov/region2/qa/documents.htm#qag
EPA Region 3 - http://www.epa.gov/region3/esc/QA/docs_qapp.htm
EPA Region 4 - http://www.epa.gov/region4/sesd/oqa/r4qmp.html
EPA Region 6 - http://www.epa.gov/earth1r6/6pd/qa/qatools.htm
EPA Region 9 - http://www.epa.gov/region9/qa/pdfs/qaprp_guidance3.pdf
EPA Region 10 - http://www.epa.gov/quality/qs-docs/g5-final.pdf

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

GOAL 2 OBJECTIVE 3

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of Six Year Review decisions (PART Measure)**
- **Percentage of planned outputs delivered in support of Contaminated Candidate List decisions (PART Measure)**
- **Percentage of planned outputs delivered in support of WQRP long-term goal #1: the protection of human health and ecosystems as related to designated uses for aquatic systems and the beneficial use of biosolids long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of WQRP long-term goal #2: diagnostics and forecasting techniques for the protection of human health and ecosystems as related to designated uses for aquatic systems and the beneficial use of biosolids long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the WQRP long-term goal #3: 1) restore impaired aquatic systems, 2) protect unimpaired systems, 3) provide human health risk and treatment process information on the beneficial use of biosolids, and 4) forecast the ecologic, economic, and human health benefits of alternative approaches to attaining water quality standards (PART Measure)**

Performance Database: Integrated Resources Management System (internal database)

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of a program's long-term goals, each program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual milestones and outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program

reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Drinking Water Multi-Year Plan, available at: http://epa.gov/osp/myp/dw.pdf
Water Quality Multi-Year Plan, available at: http://epa.gov/osp/myp/wq.pdf
Drinking Water Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004371.2005.html
Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html

FY 2009 Performance Measure:

- **Peer-reviewed publications over FTE (Efficiency Measure)**

Performance Database: No internal tracking system.

Data Source: Data are derived from a self-produced list of program publications and financial records for FTE employees.

Methods, Assumptions and Suitability: The universe of peer-reviewed publications includes 1) journal articles, 2) books and book chapters, and 3) EPA reports, where at least one EPA author is listed or where the publication is the result of an EPA grant. If a publication includes more than one EPA author, that publication is counted only once. Materials submitted for publication but not yet published are not included. FTE are actual program full time equivalents.

QA/QC Procedures: N/A

Data Quality Reviews: All publications included in the data are peer reviewed according to EPA's Peer Review Handbook (3rd Edition).

Data Limitations: FTE data do not include extramurally-funded contributors. Additionally, data do not capture the quality or impact of the research publications. However, long-term performance measures and independent program reviews are used to measure research quality and impact.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: EPA's Peer Review Handbook, available at: http://www.epa.gov/peerreview/pdfs/Peer%20Review%20HandbookMay06.pdf
Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART efficiency measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

GOAL 3 OBJECTIVE 1

FY 2009 Performance Measure:

- **Daily per capita generation of municipal solid waste [PART performance]**

Performance Database: Data are provided by the Department of Commerce. EPA does not maintain a database for this information.

Data Source: The baseline numbers for municipal solid waste (MSW) 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 materials production and consumption data from various industries.

Methods, Assumptions and Suitability: Data on domestic production of materials and products are compiled using published data series. U.S. Department of Commerce sources are used, where available; but in several instances more detailed information on production of goods by end-use is available from trade associations. The goal is to obtain a consistent historical data series for each product and/or material. Data on average product lifetimes are used to adjust the data series. These estimates and calculations result in material-by-material and product-by product estimates of MSW generation, recovery, and discards. To strategically support attainment of the 35% recycling goal, EPA has identified specific components of the MSW stream on which to focus: paper and paperboard, organics (yard and food waste), and packaging and containers. For these targeted efforts EPA will examine data on these waste components.

There are various assumptions factored into the analysis to develop estimates of MSW generation, recovery and discards. Example assumptions (from pages 141-142 of year 2000 "Characterization Report") include: Textiles used as rags are assumed to enter the waste stream the same year the textiles are discarded. Some products (e.g., newspapers and packaging) normally have short lifetimes and products are assumed to be discarded in the year they are produced.

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, "Characterization of Municipal Solid Waste in the United States," is 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.

Data Limitations: 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.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: Because the statistics on MSW generation and recycling are widely reported and accepted by experts, no new efforts to improve the data or the methodology have been identified or are necessary.

References: *Municipal Solid Waste in the United States: 2003 Facts and Figures*, EPA, April 2005 (EPA530-F-05-003), http://www.epa.gov/epaoswer/non-hw/muncpl/msw99.htm

FY 2009 Performance Measure:

- **Pounds of MSW recycled related to EPA recycling efforts over total EPA recycling dollars and FTE [PART efficiency-under development]**

Performance Database: Data are provided by EPA and the Department of Commerce.

Data Source: National estimates for municipal solid waste (MSW) 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 materials production and consumption data from various industries.

Additional Agency performance data include: total pounds recycled in a year attributable to EPA FTE and contract funds as reported in EPA's Annual Commitment System (ACS), recycling achievements in EPA's recycling partnership programs, as well as the total cost to the Agency including annual recycling dollars, and FTE for HQ and the Regions.

Methods, Assumptions and Suitability: Data on domestic production of materials and products are compiled using published data series. U.S. Department of Commerce sources are used, where available; but in several instances more detailed information on production of goods by end-use is available from trade associations. The goal is to obtain a consistent historical data series for each product and/or material. Data on average product lifetimes are used to adjust the data series. These estimates and calculations result in material-by-material and product-by product estimates of MSW generation, recovery, and discards.

4-Year Performance Data
Annual Performance Goals and Measures

EPA's new long-term 2011 measure focuses on the total pounds of recycling that EPA influences in the United States. EPA helps to increase the amount of materials recycled through its educational materials, technical support, direct assistance, and through recycling partnership programs such as WasteWise, GreenScapes and Recycling on the Go. EPA's new long-term measure focuses on the Agency's recycling achievements by attributing a certain percentage of the pounds recycled in its recycling partnership programs to Agency pollution prevention efforts, counting 100% the total pounds recycled through its grants and projects supported by Agency FTE and contract funds as reported in ACS, and adding an additional 10% of the total national pounds recycled as an estimate of EPA's influence on national recycling rate. In addition, the new MSW efficiency measure focuses on EPA costs, both extramural dollars and FTE. By focusing on the Agency's specific contributions to recycling, this will more accurately represent EPA's efficiency.

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, "Characterization of Municipal Solid Waste in the United States," is reviewed by a number of experts for accuracy and soundness.

EPA's budget information and partnership programs data are subject to EPA's QA/QC procedures.

Data Quality Review: The "Characterization of Municipal Solid Waste in the United States" report, including the baseline numbers and annual rates of recycling and per capita municipal solid waste generation, is widely accepted among solid waste experts.

Data Limitations: 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.

In addition, the new measure is contingent upon collection of accurate and up-to-date information from the recycling partnership programs.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: The new long-term measure represents EPA's accomplishments in promoting recycling.

References:

Municipal Solid Waste in the United States: 2003 Facts and Figures, EPA, April 2005 (EPA530-F-05-003), http://www.epa.gov/epaoswer/non-hw/muncpl/msw99.htm.

Waste News, "Municipal Recycling Survey," (available annually).

Cutting the Waste Stream in Half: Community Record-Setters Show How, EPA-530-R-99-013, June 1999.

Evaluation of Diversion and Costs for Select Drop-Off Recycling Programs, EPA-600-R-95-109, June 1995.

Evaluating the Environmental Effectiveness of Recycling in Pittsburgh, Carnegie Mellon University, May 2002.

FY 2009 Performance Measure:

- **Number of hazardous waste facilities with new controls or updated controls. [PART measure]**

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program.

Data Source: Data are mainly entered by the states and can be entered directly into RCRAInfo, although some choose to use a different program and then "translate" the information into RCRAInfo. Supporting documentation and reference materials are maintained in Regional and state files.

Methods, Assumptions and Suitability: RCRAInfo, the national database which supports EPA's RCRA program, contains information on entities (generically referred to as "handlers") engaged in hazardous waste generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRAInfo has several different modules, including status of RCRA facilities in the RCRA permitting universe.

QA/QC Procedures: States and EPA's Regional offices generate the data and manage data quality related to timeliness and accuracy. Within RCRAInfo, the application software contains structural controls that promote the correct entry of the high-priority national components. RCRAInfo documentation, which is available to all users on-line at http://www.epa.gov/rcrainfo/, provides guidance to facilitate the generation and interpretation of data. Even with the increasing emphasis on data quality, with roughly 10,000 units in the baseline (e.g., a facility can have more than one unit), we hear of data problems with some facilities every year, particularly with the older inactive facilities. When we hear of these issues, we work with the EPA Regional offices to see that they get resolved. It may be necessary to make a few adjustments to the permitting baseline as data issues are identified. Determination of whether or not the facility has approved controls in place is based primarily on the legal and

operating status codes for each unit. Each year since 1999, in discussions with Regional offices and states, EPA has highlighted the need to keep the data that support the GPRA permitting goal current. RCRAInfo is the sole repository for this information and is a focal point for planning from the local to national level. Accomplishment of updated controls is based on the permit expiration date code. We have discussed the need for correct entry with the Regions.

During 2008, we plan to update the baseline for tracking in FY09 and beyond. The updates are anticipated to be minimal. New reports should be developed in RCRAInfo in FY08 in order to better track FY09 goals.

Note: Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized state personnel. It is not available to the general public because the system contains enforcement sensitive data. The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste sites.

Data Quality Review: The 1995 GAO report *Hazardous Waste: Benefits of EPA's Information System Are Limited* (AIMD-95-167, August 22, 1995, http://www.gao.gov/archive/1995/ai95167.pdf) on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. Recommendations coincide with ongoing internal efforts to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states. RCRAInfo, the current national database has evolved in part as a response to this report.

Data Limitations: The authorized states have ownership of their data and EPA has to rely on them to make changes. The data that determine if a facility has met its permit requirements are prioritized in update efforts. Basic site identification data may become out-of-date because RCRA does not mandate annual or other periodic notification by the regulated entity when site name, ownership and contact information changes. Nevertheless, EPA tracks the facilities by their IDs and those should not change even during ownership changes. The baselines are composed of facilities that can have multiple units. These units may consolidate, split or undergo other activities that cause the number of units to change. We aim to have static baselines, but there may be occasions where we would need to make minor baseline modifications. The baseline of facilities that are currently tracked for updated controls are intended to apply to the facilities that are "due for permit renewals," but we anticipate that there will be some facilities that cease to be "due for permit renewals" because of a change in facility status.

Error Estimate: N/A. Currently OSW does not collect data on estimated error rates.

New/Improved Data or Systems: 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, and using commercial off-the-shelf software to develop reports from database tables. New reporting capabilities have been added in FY07.

References: RCRAInfo documentation and data (http://www.epa.gov/rcrainfo/). The 1995 GAO report *Hazardous Waste: Benefits of EPA's Information System Are Limited* (AIMD-95-167, August 22, 1995, http://www.gao.gov/archive/1995/ai95167.pdf).

FY 2009 Performance Measures:

- **No more than 10,000 confirmed releases per year**
- **Increase the rate of significant operational compliance by 1% of the previous year's target**
- **Annual confirmed releases per annual underground storage tanks leak prevention cost [PART Efficiency]**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database. States individually maintain records for reporting state program accomplishments.

Data Source: Designated state agencies submit semi-annual progress reports to the EPA Regional offices. For the PART Efficiency Performance Measure, OUST will estimate the value of this efficiency measure based on data that EPA and state agencies currently collect and maintain. The data includes the states' semi-annual activity reports, which track the number of releases confirmed each year and the number of active underground storage tanks; funding for leak prevention and matching expenditure of 25 percent for every dollar of leak prevention funding the states receive; and EPA's prevention program administration costs, such as salary, travel expenses, contracts and working capital funds.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: For the semi-annual activity report data, EPA's Regional offices verify and then forward the data in an Excel spreadsheet to OUST. OUST staff examine the data and resolve any discrepancies with the regional offices. The data are displayed in an Excel spreadsheet on a region-by-region basis, which is a way regional staff can check their data. For the PART Efficiency Measure, FY 2007 was the baseline for implementation and QA/QC procedures are not yet in place.

Data Quality Review: None.

Data Limitations: For the semi-annual activity report, percentages reported are sometimes based on estimates and extrapolations from sample data. Data quality depends on the accuracy and completeness of state records.

Error Estimate: N/A

New/Improved Data or Systems: None.

References: U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf.

FY 2009 Performance Measure:

- **Percentage of coal combustion product ash that is used rather than disposed**

Performance Database: Data to support this measure are provided by the Department of Energy and American Coal Ash Association (ACAA). EPA collects data on generation of materials (Toxic Release Inventory), but it does not maintain a database for utilization.

Data Source: The ACAA conducts a voluntary survey on coal ash generation and recycling practices of its membership, which comprises approximately 35% of the electricity generating capacity of the United States. The ACAA survey information is compared to the other sources of utilization data, including the Department of Energy's Energy Information Agency (EIA), the Portland Cement Association and other publicly available trade association data. A limited amount of data relevant to recycling has been reported on EIA Form 767, which was discontinued in 2007. These data will likely be collected on a different EIA form in the future.

Methods, Assumptions and Suitability: The CCP recycling rate is defined as the tonnage of coal ash recycled divided by the tonnage of coal ash generated nationally by coal-fired electric utilities. Data on domestic production of materials and products are compiled using published data series. U.S. Department of Energy sources are used, where available; but for specific utilization data more detailed information on the production of CCPs is available from trade associations. The goal is to obtain a consistent historical data series for products and materials. Data on average production as compared to utilization may provide estimates as to the effectiveness of beneficial use outreach.

QA/QC Procedures: Quality assurance and quality control for production numbers reported on EIA 767 are provided by the Department of Energy's internal procedures and systems. Data on utilization are reviewed by CCP industry experts for accuracy.

Data Quality Review: The reporting of utilization data is voluntary and requires extrapolation and integration with several sources of data. TRI data does not track end-use and does not require reporting of materials by their utilization

Data Limitations: Data limitations stem from the fact that the baseline statistics and annual rates of utilization are collected from different sources and are not mandated by statute or regulation. New data sources may be compared to historic data to determine if trends are reasonable and expected.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: New or additional measurement techniques will need to be developed for 2007 data and beyond based on the development of new EIA forms to track generation and recycling.

References: The American Coal Ash Annual Survey is located at http://www.acaa-usa.org/.

FY 2009 Performance Measure:

- **Number of facilities with new or updated controls per million dollars of program cost [PART efficiency]**

Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program and provides information on facilities under control.

Costs by the permittee are estimated through the annual cost estimates contained in the Information Collection Requests (ICR) supporting statements relevant to the RCRA Base Program. ICRs are contained in the Federal Docket Management System. Base program appropriation information is maintained in the Budget Automation System (BAS).

Data Source: The Office of Solid Waste develops ICRs and ensures they have active ICRs approved by the OMB for all of their RCRA permitting and base program information collection activities. The Budget Automation System (BAS) automates EPA's budget processes, including planning, budgeting, execution, and reporting. Budget data is entered at a general level by offices and regions or by the Office of the Chief Financial Officer (OCFO).

Methods, Assumptions and Suitability:

Numerator – Facilities under control is an outcome based measure as permits or similar mechanisms are not issued until facilities have met standards or permit conditions that are based

on human health or environmental standards. Under the corresponding performance measure, 95% of facilities are to be under control by 2008.

Denominator – The denominator is the sum of two costs. The first is permitting costs based on Information Collection Requests for the base RCRA program. The costs will take into account recent rulemakings, including the Burden Reduction Rulemaking (published April 2006), which will impact program expenditures. The costs will also take into account one time costs associated with first year implementation.

The second program cost in the denominator is the input of a three year rolling average appropriation for Environmental Programs and Management (EPM) and State Tribal and Grant (STAG) program. Corrective action programs costs will not be included but will be addressed in a separate efficiency measure. A rolling average of appropriations is more appropriate since some of the facility controls depend upon past resources. Issuance time for a permit, for example, can exceed one year with public hearings and appeals. The cumulative number of facilities with controls in place is appropriate (rather than a single year's increment) because the appropriations are used to maintain facilities that already have controls in place (e.g. inspections and permit renewals) as well as to extend the number of facilities with controls.

QA/QC Procedures: QA/QC of the ICR costs is based on internal and external review of the data**.** BAS data undergoes quality assurance and data quality review through the Chief Financial Officer.

Data Quality Review: None.

Data Limitations: The data sources for the program costs identified in the denominator of the measure include all of the RCRA base program appropriations (e.g. RCRA Subtitle D program implementation) and not just costs for permitting. Accordingly, the measure cannot be compared with other similar government programs.

Error Estimate: N/A. Currently OSW does not collect data on estimated error rates.

New/Improved Data or Systems: No new efforts to improve the data or methodology have been identified

References: Federal Document Management System www.regulations.gov; Budget Automation Management System

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Number of tribes covered by an adequate and recently-approved integrated solid waste management plan**
- **Number of closed, cleaned-up or upgraded open dumps in Indian Country and on other Tribal lands**

Performance Database: EPA's regional offices, in collaboration with the Indian Health Service (IHS), report annually the performance data to the WSTARS database.

Data Source: EPA and the Indian Health Service are co-sponsors of the Tribal Solid Waste Management Assistance Project. The formation of this workgroup resulted from the 1998 *Report to Congress* on open dumps on Indian Lands. The Indian Health Service was tasked to identify the high threat sites in need of upgrade or closure, and report the information to the WSTARS Database. The IHS WSTARS data are reported voluntarily by federally recognized tribal members. The member tribal data are extrapolated to generate national estimates, per the request from Congress.

Methods, Assumptions and Suitability: The Tribal Solid Waste Management Assistance Project is a national program that began in 2001 to increase the number of tribes covered by an adequate and recently-approved integrated waste management plan, and to close, clean-up, or upgrade open dumps in Indian country and on other tribal lands.

The latest EPA and IHS annual data show that an annual, incremental rate will allow the tribes to reach the goals established by 2011.

QA/QC Procedures: The IHS WSTARS data are reported voluntarily by federally recognized tribal members. Quality assurance and quality control are provided by internal procedures of the IHS WSTARS reporting process.

Data Quality Review: The data are reviewed by the EPA and IHS for data quality. The data are considered to be accurate on a national scale.

Data Limitations: The WSTARS contains data pertaining to the open dumps and solid waste management plans of the federal recognized tribal members. The WSTARS membership comprises all of the 562 federally recognized tribes of the United States. Because accurate assumptions can be made about the numbers of open dumps and the solid waste management plans generated, the data may be extrapolated to estimate the total open dumps and solid waste management plans for the federally recognized tribes within the United States. The data, however, may be limited in certain regions of the country, making extrapolations to a national statistic inaccurate.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: No new efforts to gather different or additional data are contemplated at this time.

References: The IHS, WSTARS data are available from the IHS website at www.ihs.gov.

GOAL 3 OBJECTIVE 2

FY 2009 Performance Measures:

- **Number of inspections and exercises conducted at oil storage facilities required to have Facility Response Plans**
- **Gallons of oil spilled to navigable waters per million program dollars spent annually on prevention and preparedness at FRP facilities [PART efficiency]**
- **Percentage of inspected facilities subject to SPCC regulations found to be in compliance. [PART performance]**
- **Percentage of inspected facilities subject to FRP regulations found to be in compliance. [PART performance]**

Performance Database: The EPA Annual Commitment System (ACS) in BAS is the database for the number of inspections/exercises at SPCC and FRP facilities. Using data submitted directly by Regional staff as well as data in ACS , Office of Emergency Management (OEM) tracks in a spreadsheet national information about Regional activities at FRP facilities. Data about gallons of oil spilled are maintained in a National Response Center (NRC) database that reflects information reported to the NRC by those responsible for individual oil spills. Prevention and preparedness expenditures are tracked in the Integrated Financial Management System (IFMS), the Agency's financial database.

Data Source: Data concerning inspections/exercises at FRP and SPCC facilities are provided by Regional staff. Data concerning gallons of oil spilled to navigable waters are gathered from the publicly available National Response Center database. Data about program expenditures are extracted by EPA HQ from IFMS.

Methods, Assumptions and Suitability: The spill/exercise data are entered by Regional staff experienced in data entry. In every case, direct data (rather than surrogates open to interpretation) are entered.

QA/QC Procedures: Data are regularly compared to similar data from the past to identify potential errors.

Data Quality Reviews: EPA regularly reviews recent data, comparing them to data gathered in the past at similar times of year and in the same Regions. Any questionable data are verified by direct contact with the Regional staff responsible for providing the data.

Data Limitations: The NRC data will reflect the extent to which those responsible for oil spills accurately report them to the NRC.

Error Estimate: Data reported by the Regions should be relatively free of error. There may be some error in the NRC data, due to the fact that some spills might not be reported and/or some spills might be reported by more than one person. NRC and EPA procedures should identify multiple reports of the same spill, but it is not usually possible to identify an unreported spill.

New/Improved Data or Systems: There are no current plans to develop a dedicated system, to manage the various data.

References: For additional information on the Oil program, see www.epa.gov/oilspill

FY 2009 Performance Measure:

- **Score in annual Core Emergency Response assessment**

Performance Database: No specific database has been developed. Data from evaluations from each of the 10 Regions are tabulated and stored using standard software (e.g., Word spreadsheets).

Data Source: Data are collected through detailed surveys of all Regional programs, as well as HQ offices and Special Teams of responders; the process includes interviews with personnel and managers in each program office. The score represents a composite based upon data from each unique Regional and headquarters organization. Annual increments represent annual improvements. The survey instrument was developed based upon Core Emergency Response (ER) elements, and has been approved by EPA Headquarters and Regional managers. Core ER elements cover all aspects of the Core ER program, including Regional Response Centers, transportation, coordination with backup Regions, health and safety, delegation and warrant authorities, response readiness, response equipment, identification clothing, training and exercises, and outreach.

While EPA is currently prepared to respond to chemical, biological, and radiological incidents, improvement in the emergency response and homeland security readiness measure will

demonstrate an increased ability to respond quickly and effectively to national-scale events. The FY 2009 Core ER target is to improve emergency response and homeland security readiness by 10 points from the FY 2008 performance.

Methods, Assumptions and Suitability: The Core ER elements were developed over the last several years by the EPA Removal Program to identify and clarify what is needed to ensure an excellent emergency response program. The elements, definitions, and rationales were developed by staff and managers and have been presented to the Administrator and other high level Agency managers. Based on the Core ER standards, evaluation forms and criteria were established for EPA's Regional programs, the Environmental Response Team (ERT), and Headquarters. These evaluation criteria identify what data need to be collected, and how that data translate into an appropriate score for each Core ER element. The elements and evaluation criteria will be reviewed each year for relevance to ensure that the programs have the highest standards of excellence and that the measurement clearly reflects the level of readiness. The data are collected from each Regional office, Special Teams, and Headquarters using a systematic, objective process. Each evaluation team consists of managers and staff, from Headquarters and possibly from another EPA Regional office, with some portion of the team involved in all reviews for consistency and some portion varying to ensure independence and objectivity. For instance, a team evaluating Region A might include some or all of the following: a staff person from Headquarters who is participating in all reviews, a staff person from Headquarters who is very familiar with Region A activities, a manager from Headquarters, and a staff person and/or manager from Region B. One staff or group will be responsible for gathering and analyzing all the data to determine the overall score for each Regional office, Special Teams and Headquarters, and for determining an overall National score.

QA/QC Procedures: See "Methods, Assumptions and Suitability."

Data Quality Review: The evaluation team will review the data (see Methods, Assumptions and Suitability) during the data collection and analysis process. Additional data review will be conducted after the data have been analyzed to ensure that the scores are consistent with the data and program information. There currently is no specific database that has been developed to collect, store, and manage the data.

Data Limitations: One key limitation of the data is the lack of a dedicated database system to collect and manage the data. Standard software packages (word processing, spreadsheets) are used to develop the evaluation criteria, collect the data, and develop the accompanying readiness scores. There is also the possibility of subjective interpretation of data.

Error Estimate: It is likely that the error estimate for this measure will be small for the following reasons: the standards and evaluation criteria have been developed and reviewed extensively by Headquarters and EPA's Regional managers and staff; the data will be collected by a combination of managers and staff to provide consistency across all reviews plus an

important element of objectivity in each review; the scores will be developed by a team looking across all ten Regions, Special Teams, and Headquarters; and only twelve sets of data will be collected, allowing for easier cross-checking and ensuring better consistency of data analysis and identification of data quality gaps.

New/Improved Data or Systems: There are no current plans to develop a dedicated system to manage the data.

References: None.

FY 2009 Performance Measures:

- **Number of final Superfund site assessment decisions [PART performance]**
- **Number of Superfund sites with human exposures under control [PART performance]**
- **Number of Superfund sites with contaminated groundwater migration under control [PART performance]**
- **Annual number of Superfund sites with remedy construction completed [PART performance]**
- **Number of Superfund sites that are ready for anticipated use site-wise**
- **Number of Superfund sites with human exposures under control per million dollars obligated [PART efficiency]**
- **Program dollars expended annually per operable unit completing cleanup activities [Federal Facilities PART efficiency measure].**
- **Voluntary removal actions overseen by EPA and completed [PART performance]**
- **Superfund-lead removal actions completed annually [PART performance]**
- **Superfund-lead removal actions completed annually per million dollars [PART efficiency]**
- **Number of Federal Facility Superfund sites where all remedies have completed construction [PART]**
- **Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined [PART]**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) is the database used by the Agency to track, store, and report Superfund site information.

Data Source: CERCLIS is an automated EPA system; headquarters and EPA's Regional offices enter data into CERCLIS on a rolling basis. The Integrated Financial Management System (IFMS) is EPA's financial management system and the official system of record for budget and financial data.

4-Year Performance Data
Annual Performance Goals and Measures

Methods and Assumptions: Except for financial information, each performance measure is a specific variable entered into CERCLIS following specific coding guidance and corresponding supporting site-specific documentation.

IFMS contains records of all financial transactions (e.g., personnel, contracts, grants, other) of Superfund appropriation resources, as distinguished by U.S. Treasury schedule codes. Procurement data are entered manually into IFMS by Funds Control Officers throughout the Agency. Site-specific obligations are distinguished through the Site/Project field of the IFMS account number that is assigned to every financial transaction.

Total annual obligations include current and prior year appropriated resources, excluding Office of Inspector General (OIG) and Science and Technology transfers. Site-specific obligation data are derived using query logic that evaluates the Site/Project field of the IFMS account number.

Suitability: The Superfund Remedial Program's performance measures for FY 2009 are the result of several years of refinement with OMB as follow-up to the Program's 2004 PART Review. The measures currently used to demonstrate program progress reflect several major milestones that reflect site cleanup progress from start (final assessment decision) to finish (sites ready for anticipate use). Each measure marks a significant step in ensuring human health and environment protection at Superfund sites. OMB has accepted these measures for monitoring program performance on an annual basis.

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund Program 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, data owners, and data input personnel; 4) Quick Reference Guides (QRG), which are available in the CERCLIS Documents Database and provide detailed instructions on data entry for nearly every module in CERCLIS; 5) Superfund Comprehensive Accomplishment (SCAP) Reports within CERCLIS, which serve as a means to track, budget, plan, and evaluate progress towards meeting Superfund targets and measures; (6) a historical lockout feature in 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. Specific direction for these controls is contained in the Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009 (http://www.epa.gov/superfund/action/process/spim08.htm).

CERCLIS operation and further development is taking place under the following administrative control quality assurance procedures: 1) Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf); 2) the Office of Superfund Remediation and Technology Innovation Quality Management Plan

(http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf) 3) Agency platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf); 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS is being developed and maintained (http://www.epa.gov/quality/informationguidelines); and 5) Agency security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView). In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS outputs.

The financial data are compliant with the Federal Managers Financial Integrity Act (FMFIA) of 1982 and received FY 2005 FMFIA certification

Data Quality Reviews: Two audits, one by the Office Inspector General (OIG) and the other by Government Accountability Office (GAO), were conducted to assess the validity of the data in CERCLIS. The OIG audit report, *Superfund Construction Completion Reporting* (No. E1SGF7_05_0102_ 8100030), dated December 30, 1997, 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." Further information on this report is available at http://www.epa.gov/oigearth/eroom.htm. The GAO's report, *Superfund: Information on the Status of Sites* (GAO/RCED-98-241), dated August 28, 1998, was prepared to verify the accuracy of the information in CERCLIS on sites' cleanup progress. The report estimates that the cleanup status of National Priority List (NPL) sites reported by CERCLIS as of September 30, 1997, is accurate for 95 percent of the sites. Additional information on the *Status of Sites* may be obtained at http://www.gao.gov/archive/1998/rc98241.pdf.

Another OIG audit, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002, evaluated the accuracy, completeness, timeliness, and consistency of the data entered into CERCLIS. The report provided 11 recommendations to improve controls for CERCLIS data quality. EPA concurred with the recommendations contained in the audit, and many of the identified problems have been corrected or long-term actions that would address these recommendations continue to be underway. Additional information about this report is available at http://www.epa.gov/oigearth/eroom.htm.

The IG reviews annually the end-of-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) data, in an informal process, to verify the data that supports the performance measures. Typically, there are no published results.

The Quality Management Plan (QMP) for the Office of Solid Waste and Emergency Response (OSWER) was signed in August 2003 (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf).

EPA received an unqualified audit opinion by the OIG for the annual financial statements, and the auditor recommended several corrective actions. All recommendations have been implemented by Office of the Chief Financial Officer in IFMS.

Data Limitations: Weaknesses were identified in the OIG audit, *Information Technology Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002. The Agency disagreed with the study design and report conclusions; however, the report provided 11 recommendations with which EPA concurred and either implemented or continues to implement. These include: 1) FY 02/03 SPIM Chapter 2 update was improved to define the Headquarters' and Regional roles and responsibilities for maintaining planning and accomplishment data in ERCLIS; 2) language was added to the FY 04/05 SPIM Appendix A, Section A.A.5 'Site Status Indicators' to clarify the use of the non-NPL status code of "SX"; 3) a data quality section was added to the FY 04/05 SPIM Appendix A, Section A.A.6 'Data Quality'; 4) FY 04/05 SPIM Appendix E, Section E.A.5 "Data Owners/Sponsorship' was revised to reflect what data quality checks (focus data studies) will be done by designated Regional and headquarters staff; 5) a data quality objectives supplement for GPRA measures was added in Change 6 to the FY04/05 SPIM. For changes implemented due to this OIG audit, see the Change Log for this SPIM at http://www.epa.gov/superfund/action/process/pdfs/changelog6.pdf). The development and implementation of a quality assurance process for CERCLIS data continues. This process includes delineating data quality objectives for GPRA targets, program measures, and regional data. The Agency has begun reporting compliance with the current data quality objectives.

Error Estimate: The GAO's report, *Superfund: Information on the Status of Sites* (GAO/RECD-98-241), dated August 28, 1998, estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95 percent of the sites. The OIG report, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002, states that over 40 percent of CERCLIS data on site actions reviewed was inaccurate or not adequately supported. Although the 11 recommendations were helpful and improved some controls over CERCLIS data, the Agency disagreed and strongly objected to the study design and report conclusions.

New/Improved Data or Systems: As a result of a modernization effort completed in 2004, CERCLIS has standards for data quality and each EPA Region's CERCLIS Data Entry Control Plan, which identifies policies and procedures for data entry, is reviewed annually. EPA Headquarters has developed data quality audit reports and provided these reports to the Regions. These reports document data quality for timeliness, completeness, and accuracy as determined by the Superfund data sponsors to encourage and ensure high quality. Information developed and gathered in the modernization effort is being used as a valuable resource for scoping the future redesign of CERCLIS. The redesign is necessary to bring CERCLIS into alignment with the Agency's mandated Enterprise Architecture. The first major step in this effort was the migration

of all 10 Regional databases and the Headquarters database into one single national database at the National Computing Center in RTP. The Superfund Document Management System (SDMS) has also migrated to RTP to improve efficiency and storage capacity. During this migration the SDMS was linked to CERCLIS which enable users to easily transition between programmatic accomplishments as reported in CERCLIS and the actual document that defines and describes the accomplishments. EPA Headquarters is also evaluating the need and increased functionality of an integrated SDMS-CERCLIS system. Tentatively that system is called the Superfund Enterprise Management System (SEMS). Work on SEMS has started in FY 2007 and will continue through FY 2009.

In an effort to better facilitate and capture important Superfund data, a new Five-Year Review Module was released in CERCLIS in June 2006. In addition, a new Reuse/Acreage Module was released in CERCLIS in June of 2007 to support two new performance measures.

References: OIG audit *Superfund Construction Completion Reporting*, (No. E1SGF7_05_0102_8100030) and *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality*, (No. 2002-P-00016, http://www.epa.gov/oigearth/eroom.htm); and the GAO report, *Superfund Information on the Status of Sites* (GAO/RCED-98-241, http://www.gao.gov/archive/1998/rc98241.pdf). The Superfund Program Implementation Manuals for the fiscal years 1987 to the current manual (http://www.epa.gov/superfund/policy/guidance.htm). The Quality Management Plan (QMP) for the Office of Solid Waste and Emergency Response (August 2003, http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf). Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf). The Office of Superfund Remediation and Technology Innovation Quality Management Plan (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf). EPA platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf). Quality Assurance Requirements in all contract vehicles under which CERCLIS are being developed and maintained (http://www.epa.gov/quality/informationguidelines). EPA security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView).

FY 2005 FMFIA Certification
2004 Audited Financial Statements, see http://www.epa.gov/oig/reports/financial.htm
OIG Audit "EPA Needs to Improve Change Controls for Integrated Financial Management System" dated August 24, 2004 (2004-P-00026)

All referenced internet addressed were last accessed on 07/31/07.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Number of RCRA facilities with human exposures to toxins under control.**
- **Number of RCRA facilities with migration of contaminated groundwater under control.**
- **Number of RCRA facilities with final remedies constructed.**
- **Percent increase of final remedy components constructed at RCRA corrective action facilities per federal, state and private sector costs. [PART efficiency measure]**

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database that supports EPA's RCRA program.

Data Source: The states and Regions enter data. A "High", "Medium", or "Low" entry is made in the database with respect to final assessment decision. A "yes" or "no" entry is made in the database with respect to meeting the human exposures to toxins controlled and releases to groundwater controlled indicators. An entry will be made in the database to indicate the date when a remedy is selected and the complete construction of a remedy is made. Supporting documentation and reference materials are maintained in the Regional and state files. EPA's Regional offices and authorized states enter data on a continual basis. For the efficiency measure, federal and state cost data are assembled from their respective budgets. Private sector costs are derived from data published in the Environmental Business Journal.

Methods, Assumptions and Suitability: 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. Within RCRAInfo, the Corrective Action Module tracks the status of facilities that require, or may require, corrective actions, including information related to the four measures outlined above. Performance measures 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 Corrective Action Program's progress in getting highest-priority contaminated facilities under control. Known and suspected facility-wide conditions are evaluated using a series of simple questions and flow-chart logic to arrive at a reasonable, defensible determination. These questions were issued as a memorandum titled: *Interim Final Guidance for RCRA Corrective Action Environmental Indicators, Office of Solid Waste, February 5, 1999).* Lead regulators for the facility (authorized state or EPA) make the environmental indicator determination, but facilities or their consultants may assist EPA in the evaluation by providing information on the current environmental conditions.

Remedies selected and complete constructions of remedies measure are used to track the RCRA program's progress in getting its highest-priority contaminated facilities moving towards final cleanup. Like with the environmental indicators determination, the lead regulators for the facility

select the remedy and determine when the facility has completed construction of that remedy. Construction completions are collected on both an area-wide and site-wide basis for sake of the efficiency measure.

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.

Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized state personnel. It is not available to the general public because the system contains enforcement sensitive data**.** The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste facilities.

Data Quality Review: GAO's 1995 Report on EPA's Hazardous Waste Information System (http://www.access.gpo.gov/su_docs/fdlp/pubs/study/studyhtm.html) reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. 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. EPA's Quality Staff of the Office of Environmental Information conducted a quality systems audit in December 2003. The audit found the corrective action program satisfactory.

Data Limitations: No data limitations have been identified for the performance measures. As discussed above, the performance measure 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. For the efficiency measure, private sector costs are not publicly available. Estimates of these costs are derived from Environmental Business Journal data.

Error Estimate: N/A. Currently, the Office of Solid Waste does not collect data on estimated error rates.

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 the waste management practices of 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.

References: GAO's 1995 Report on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. This historical document is available on the Government Printing Office Website (http://www.access.gpo.gov/su_docs/fdlp/pubs/study/studyhtm.html).

FY 2009 Performance Measures:

- **Number of cleanups that meet state risk-based standards for human exposure and groundwater migration. (Tracked as: Number of leaking underground storage tank cleanups completed.) [PART performance]**
- **Number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian country. (Tracked as: Number of leaking underground storage tank cleanups completed in Indian Country.) [PART performance]**
- **Cleanups complete (3-year rolling average) per total cleanup dollars. (from public and private sector) [PART efficiency]**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database. States individually maintain records for reporting state program accomplishments.

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

Methods, Assumptions and Suitability: The cumulative number of confirmed releases where cleanup has been initiated and where the state has determined that no further actions are currently necessary to protect human health and the environment, includes sites where post-closure monitoring is not necessary as long as site specific (e.g., risk based) cleanup goals have been met. Site characterization, monitoring plans and site-specific cleanup goals must be established and cleanup goals must be attained for sites being remediated by natural attenuation to be counted in this category. (See http://www.epa.gov/OUST/cat/pm032603.pdf.)

QA/QC Procedures: EPA's regional offices verify and then forward the data in an Excel spreadsheet to OUST. OUST staff examine the data and resolve any discrepancies with the

regional offices. The data are displayed in an Excel spreadsheet on a region-by-region basis, which is a way regional staff can check their data.

Data Quality Review: None.

Data Limitations: Data quality depends on the accuracy and completeness of state records.

Error Estimate: N/A

New/Improved Data or Systems: None

References: U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf.

GOAL 3 OBJECTIVE 3

FY 2009 Performance Measures:

- **Refer to DOJ, settle, or write off 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**
- **Percentage of Superfund sites at which settlement or enforcement action taken before the start of a Remedial Action (RA)**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation. The database includes sites that are on the National Priorities List (NPL) or being considered for the NPL.

Data Source: Automated EPA system; Headquarters and EPA's Regional Offices enter data into CERCLIS.

Methods, Assumptions and Suitability: There are no analytical or statistical methods used to collect the information. The performance data collected on a fiscal year basis only. Enforcement reports are run at the end of the fiscal year, and the data that support this measure are extracted from the report.

QA/QC Procedures: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved October 2, 2007. To ensure data accuracy and control, the following

administrative controls are in place: 1) Superfund Program 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, data owners, and data input personnel; 4) Quick Reference Guides (QRG), which are available in the CERCLIS Documents Database and provide detailed instructions on data entry for nearly every module in CERCLIS; 5) Superfund Comprehensive Accomplishment (SCAP) Reports within CERCLIS, which serve as a means to track, budget, plan, and evaluate progress towards meeting Superfund targets and measures; (6) a historical lockout feature in 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. Specific direction for these controls is contained in the Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009 (http://www.epa.gov/superfund/action/process/spim08.htm).

CERCLIS operation and further development is taking place under the following administrative control quality assurance procedures: 1) Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf); 2) the Office of Superfund Remediation and Technology Innovation Quality Management Plan (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf) 3) Agency platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf); 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS is being developed and maintained (http://www.epa.gov/quality/informationguidelines); and 5) Agency security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView). In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS outputs.

Data Quality Review: The IG annually reviews the end-of-year CERCLIS data, in an informal process, to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: None

Error Estimate: NA

New/Improved Data or Systems: None

References: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved October 2, 2007.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal (PART Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of the Land Preservation and Restoration Research Program's long-term goals, the Land program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Contaminated Sites Multi-Year Plan, available at: http://www.epa.gov/osp/myp/csites.pdf
Resource Conservation and Recovery Act (RCRA) Multi-Year Plan, available at: http://www.epa.gov/osp/myp/rcra.pdf
Land Protection and Restoration Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

FY 2009 Performance Measure:

- **Average time (in days) for technical support centers to process and respond to requests for technical document review, statistical analysis and evaluation of characterization and treatability study plans. (Efficiency Measure)**

Performance Database: No internal tracking system.

Data Source: Data are generated based on technical support centers' tracking of timeliness in meeting customer needs.

Methods, Assumptions and Suitability: The dates of requests, due dates, response time, and customer outcome feedback are tabulated for the Engineering, Ground Water, and Site Characterization Technical Support Centers.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Land Protection and Restoration Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html

GOAL 4 OBJECTIVE 1

FY 2009 Performance Measure:

- **Cumulative number of assays that have been validated. (PART Measure)**

Performance Database: Performance is measured by the cumulative number of assays validated. The completion of the validation process for an assay can take several years. Excel spreadsheets are used to capture and track various steps within the validation process in order to better show progress. These steps within the validation process include: detailed review papers completed, prevalidation studies completed, validation by multiple labs completed, peer reviews, and the cumulative number of assays that have been validated.

Data Source: Data are generated to support all stages of validation of endocrine test methods through contracts, grants and interagency agreements, and the cooperative support of the Organization of Economic Cooperation and Development (OECD), and EPA's Office of Research and Development (ORD). The scope of the effort includes the conduct of laboratory studies and associated analyses to validate the assays proposed for the Endocrine Disruptor Screening Program (EDSP). The baseline for this measure is zero assays validated (FY 2005).

Methods, Assumptions and Suitability: The measure is a program output which when finalized, helps to ensure that EPA meets The Food Quality Protection Act of 1996 (FQPA) requirement that EPA validate assays to screen chemicals for their potential to affect the endocrine system. The measure represents the ultimate objective of this program (e.g., validating assays for use in screening and testing chemicals for potential endocrine effects, as required by FQPA.)

QA/QC Procedures: EDSP's contractors operate independent quality assurance units (QAUs) to ensure that all studies are conducted under appropriate QA/QC programs. Two levels of QA/QC are employed. First, the contractors operate under a Quality Management Plan designed to ensure overall quality of performance under the contracts. Second, prevalidation and validation studies are conducted under a project-specific Quality Assurance Project Plans (QAPPs) developed by the contractor and approved by EPA. These QAPPs are specific to the study being conducted. Most validation studies are conducted according to Good Laboratory Practices (GLPs). In addition, EPA or its agent conducts an independent lab/QA audit of facilities participating in the validation program.

Data Quality Review: All of the documentation and data generated by the contractor, OECD and ORD, as it pertains to the EDSP, are reviewed for quality and scientific applicability. The contractor maintains a Data Coordination Center which manages information/data generated under EDSP. The contractor also conducts statistical analyses related to lab studies, chemical repository, and quality control studies.

Data Limitations: There is a data lag of approximately 9-24 months due to the variation in length and complexity of the lab studies, and for time required for review, analysis and reporting of data.

Error Estimate: N/A

New/Improved Data or Systems: N/A

4-Year Performance Data
Annual Performance Goals and Measures

References: EPA Website; EPA Annual Report; Endocrine Disruptor Screening Program Proposed Statement of Policy, Dec. 28, 1998; Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) Final Report (EPA/743/R-98/003); EPA Contract # 68-W-01-023.

FY 2009 Performance Measure:

- **Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program. (PART Efficiency Measure)**

Performance Database: EPA will measure the contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program (EDSP) by comparing the cost per study from a previous contract to the cost of a newer multiple awards contract. The newer multiple awards contract involves competition for individual work assignments among two vendors in an effort to provide increased flexibility in both the economic and scientific aspects of the contract. In addition, assays that have now been standardized may be competed on a fixed price, rather than level of effort basis, which will lead to reduced costs for the government.

This efficiency measure must be used in conjunction with the program's annual performance measure (cumulative number of assays validated) to obtain a complete picture of program performance. This is consistent with OMB's direction during the FY06 PART review of EPA's Endocrine Program - to have efficiency measures and annual performance measures, that when taken together, give a full picture of the program.

Data Source: Information will be obtained from contract documents and stored in spreadsheets by OSCP personnel responsible for managing the contracts.

Methods and Assumptions: The baseline average cost per study was calculated based on contract costs from a previous EDSP contract. A laboratory study was defined as conduct of an assay with a single chemical in a single lab, and represents standardized study costs based on a mix of *in vitro* and *in vivo* studies, as well as detail review papers. The baseline average cost per study was $62,175 in 2006. The measure of efficiency will be based on similar data from the newer multiple award contract and judged based on the target of a 1% cost reduction per year for three (3) years.

Suitability: The majority of funds allocated to the EDSP are spent on laboratory studies conducted by contractors. As a result, a measure based on the contract costs is a suitable measure of efficiency for this program.

QA/QC Procedures: Costs for products generated by scientific labs are used for this efficiency measure. OPPT's Office of Science Coordination and Policy (OSCP) maintains spreadsheets to

track contract expenditures by study. These spreadsheets are periodically checked against contract records and EPA contracts databases (i.e., Data Financial Warehouse).

Data Quality Review: Data generated from these spreadsheets, for the purposes of this efficiency measure, will be independently reviewed for accuracy before submitting information on this measure.

Data Limitations: In general, there is a data lag of approximately 9-24 months due to the variation in length and complexity of the lab studies, and for time required for review, analysis and reporting of data.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: EPA Website; EPA Annual Report; Endocrine Disruptor Screening Program Proposed Statement of Policy, Dec. 28, 1998; Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) Final Report (EPA/743/R-98/003); EPA Contract # 68-W-01-023.

FY 2009 Performance Measure:

- **Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/reregistered and available for termite treatment (PART measure)**

Performance Database: Baseline data on the number of owner-occupied structures is available from US Census Housing data. Estimates of the extent of termiticide use and termite-related damage are available from several industry and academic sources.

Data Source: Baseline data are derived from several sources, including U.S. Census data, surveys conducted by the pest control industry, and academic publications.

Methods, Assumptions and Suitability: This measure is representative of the explicit statutory mandate of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to ensure the availability of pesticides to permit their societal benefits. An important role of the National Pesticide Program is to prevent harm and preserve a level of public protection.

Pesticides are the primary means to treat or prevent termite infestation. These pesticides are not available for use to treat or prevent this problem unless the National Pesticide Program evaluates their safety and allows them into the marketplace through the Registration or Registration Review programs. Timely and effective licensing actions are required for homeowners to have

access to the benefits of these pesticides and avoid the significant economic loss from termite structural damage.

Termites are one of the most economically important insect pests in the United States. More than 600,000 U.S. homes suffer termite damage every year. Homeowners insurance can help recover losses from fires, storms, and earthquakes, but it is almost impossible to carry insurance against termite infestation and damage. This measure will utilize data that estimate the number of homes that suffer termite-related damage on an annual basis, the value of this damage, the number and frequency of termiticide treatments, and an estimate of the number of treated homes that would have received termite damage absent the use of pesticide control measures.

Through this measure, the Agency will evaluate the extent of termiticide use to protect owner-occupied housing units, average termite damage on a per housing unit basis, and an estimate of the termite structural damage avoided as a result of having safe and effective termite control products available for use.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data used in this measure. Academic research undergoes strict peer-review prior to publication. The Agency will work with non-governmental providers of data to ensure that quality data are used in developing this measure.

Data Quality Reviews: Staff and management of the Office of Pesticide Programs will perform the data quality reviews under the leadership of our QA/QC officers.

Data Limitations: This measure continues to be refined. Currently available data were not collected for performance accountability purposes and may lack precision. Non-pesticide treatment actions may account for some structural damage avoided.

Error Estimate: Error estimates for established surveys are documented by these organizations in their survey reports.

New/Improved Data or Systems: This measure will utilize existing data as well as new data developed from industry and academic research.

References: U.S. Census Bureau data (www.census.gov/compendia/statab/files/house.html); University of Georgia Entomology Dept, (www.ent.uga.edu/IPM/s100/household.htm); National Pest Management Association.
(www.pestworld.org/Database/Article.asp?ArticleID=34&UserType];
"Arizona Termites of Economic Importance", Better Pest Control, p.11, June 2005, University of Arizona, College of Agriculture and Life Sciences; "Termites: Are They Chewing Up Your Home?", National Pest Management Association; Ipsos-Insight 2005 Survey for Dow Agro (www.dowagro.com/sentricon/termiterisk/facts.htm).

FY 2009 Performance Measure:

- **Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations. (PART measure)**

Performance Database: To determine the value of potential crop loss avoided from the use of pesticides, baseline and future data are collected on crop market prices, crop production, total acres grown, acres treated with pesticides, and the percentage of crop yield loss avoided as a result of the use of pesticides.

Data Source: Baseline data on crop market prices, crop production, and total acres grown are from United States Department of Agriculture (USDA) databases, while the percentage of potential yield loss without pesticides is estimated by Biological and Economic Analysis Division (BEAD) scientists based on published and unpublished studies. The number of acres treated with the pesticides are based on data submitted by State Departments of Agriculture.

Methods, Assumptions and Suitability: The Agency will provide an estimate of the value of the potential crop loss avoided by growers from the use of registered pesticides. The method for estimating this value involves calculating the potential crop loss avoided based on the acres treated with the pesticides, per acre crop production and prices received, and potential yield without the pesticides. In an attempt to measure the magnitude of this potential crop loss avoided, the value is measured as a percent of state production in value and national production in value.

The pesticides selected for this measure will be the registered Section 3 pesticides which were previously Section 18 emergency use registrations. The data used in the analysis of the number of acres treated with the pesticides will be based on USDA databases and data submitted by the State Agricultural Departments. The percentage of potential yield loss without the pesticides will be based on the review of published and unpublished efficacy studies by BEAD scientists.

The United States (U.S.) has a large cropland, productive soils, and a variety of favorable agricultural climates. These factors contribute to and enable the U.S. to be a uniquely large and productive agricultural producer. The value of agricultural crop production in the U.S. totaled $200 billion[13] in 2003. Major field crops in value are corn ($21 billion), soybeans ($15 billion), wheat ($6 billion), and cotton ($3.6 billion), while tomatoes ($1.9 billion), apples ($1.6 billion), and strawberries ($1.2 billion) are major fruit/vegetable crops in value.

American agricultural production far outweighs domestic consumption and the U.S. is one of the World's largest agricultural exporters, worth approximately $50 billion annually (one quarter of

[13] The value received by farmers was $200 billion.

total U.S. agricultural crop production). In order to be competitive in the world market and to provide sufficient market supply for American consumers, U.S. farmers need to be able to use pesticides for pest control as long as they do not present significant risks to human health or the environment (USDA/ERS, 2004).

The goal for this measure is to develop long-term consistent and comparable information on the benefits of pesticide usage.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data derived from States, and USDA. The data used for the outcome measure is based on well-established QA/QC procedures found in *Data Quality Assessment: A Reviewer's Guide* (QA/G-9R)[2] (PDF 61pp, 225K), http://www.epa.gov/quality/dqa.html, which provides guidance on assessing data quality criteria and performance specifications.

Data Quality Review: The measure will utilize USDA/NASS methods of collecting and analyzing data.
Data Limitations: This measure is under development. Data limitations will be characterized during developmental stages of the measure and a complete evaluation will be provided in the Agency's annual Performance and Accountability Report.

Error Estimate: USDA provides discussion of analytical methods and associated variability estimates in its chemical use publications. For example, see the Agricultural Chemical Distribution Tables section, Survey and Estimation Procedure section and Reliability section of the USDA publication Agricultural Chemical Usage 2005 Field Crops Summary (http://usda.mannlib.cornell.edu/usda/nass/AgriChemUsFC//2000s/2006/AgriChemUsFC-05-17-2006.pdf).

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References:
USDA data sources include:
United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Chemical Usage.
http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1001
United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Statistics. http://www.usda.gov/nass/pubs/agstats.htm

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Percent of urban watersheds that exceeds the National Pesticide Program aquatic life benchmarks for 3 pesticides of concern. (PART measure)**

Performance Database: Baseline data are obtained from the United States Geological Survey (USGS) National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001 (http://ca.water.usgs.gov/pnsp/). Future data will be compiled from future reports.

Data Source: Baseline data are derived from the USGS National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001. USGS is currently developing sampling plans for 2008 – 2017. Future data will be available from USGS as it is made available on public websites.

Methods, Assumptions and Suitability: Water quality is a critical endpoint for measuring exposure and risk to the environment. It is a high-level measure of our ability to reduce exposure from key pesticides of concern. This measure evaluates the reduction in water concentrations of pesticides as a means to protect aquatic life. Reduced water column concentration is a major indicator of the efficacy of risk assessment, risk management, risk mitigation and risk communication actions. It will illuminate program progress in meeting the Agency's strategic pesticide and water quality goals.

The goal is to develop long-term consistent and comparable information on the amount of pesticides in streams, ground water, and aquatic ecosystems to support sound management and policy decisions. USGS-NAWQA data can help inform EPA of the long-term results of its risk management decisions based on trends in pesticide concentrations. Recent USGS information indicates exceedences of aquatic life benchmarks in 18 to 40% of the urban and agricultural watersheds sampled. USGS is currently developing sampling plans for 2008 – 2017. Draft plans call for yearly monitoring in 8 agricultural watersheds; bi-yearly sampling in 3 agricultural dominated watersheds; and sampling every four years in a second set of 25 agricultural watersheds. The sampling frequency for these 36 agricultural sites will range from approximately 15 to 35 sites samples per year based on the watershed land use class. The USGS has no plans in this time period for similar sampling in urban watersheds. Intermediate (2008 – 2010) goals will be refined when the USGS plan is finalized in late FY07.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data obtained from USGS. The data that will be used for the outcome measure is based on well-established QA-QC procedures in the USGS-NAWQA program (http://ca.water.usgs.gov/pnsp/rep/qcsummary/ and http://water.usgs.gov/owq/FieldManual/index.html).

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: The measure will utilize USGS NAWQA data. USGS is preeminent in the field of water quality sampling. Since 1991, the USGS NAWQA program has been collecting and analyzing data and information in major river basins and aquifers across the Nation. The program has undergone periodic external peer-review (http://dels.nas.edu/water/monitoring.php).

Data Limitations: This measure is under development. Data limitations will be characterized during developmental stages of the measure and a complete evaluation will be provided in the NAWQA 2011 "Cycle II" Study Report. EPA will request that USGS add additional insecticides to their sampling protocols to establish base line information for newer products that have been replacing the organophosphates (e.g., the synthetic pyrethroids).

Error Estimate: The USGS database provides estimates of analytical methods and associated variability estimates (http://ga.water.usgs.gov/nawqa/data.qa.html).

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References: USGS National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001.

The NAWQA 2011 "Cycle II" Study Report does not exist at this time – the sampling is in progress, thus there is no citation at this time. USGS has not published their sampling plan. There will be a USGS report in the 2011 timeframe.

FY 2009 Performance Measure:

- **Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate (PART measure)**

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the Toxic Exposure Surveillance System (TESS). Among the types of exposures reported are pesticide related exposures. The data collected include date of call, age, gender, location of exposure, route of exposure, substance exposed to, route of exposure, initial symptom assessment, treatment received and an evaluation of the medical outcome. Symptoms are categories as minor, moderate, or major with criteria for each category.

Data Source: PCCs provide telephone consultation to individuals and health care providers. Most PPCs are operated by a hospital or university and in aggregate serve 70-80% of the U.S. population. Each case is a separate file that needs to be manually loaded into an EPA database prior to performing statistical analysis. Trend analysis of the reported incidents could reveal problem chemicals and the effects of previous actions taken.

Methods, Assumptions and Suitability: We assume resources will continue to be available for the Agency to purchase the data and that adequate resources will be available at the local level to continue to fund the centers. The reduction in poisoning incidents is expected to result from mitigation measures made during the reregistration, from greater availability of lower risk alternative products resulting from the Agency's reduce risk registration process, from the continued implemention of worker protection enforcement and training.

QA/QC Procedures: PCCs must be certified by the American Association of Poison Control Centers (AAPCC). To be certified a PPC must have a board certified physician on call at all times, have AAPCC certified specialists available to handle all calls, have a comprehensive file of toxicology information readily available, maintain Standard Operating Procedures (SOPs), keep records on all cases and have an ongoing quality assurance program. In addition, EPA staff screen each case before analyzing the data set.

Data Quality Review: EPA conducts regular case reviews and audits to assure quality assurance of data collected. Also, as mentioned above, EPA staff reviews each case before entering into its database.

Data Limitations: Because PCC participation is voluntary and the available resources vary from year to year, the data contains uncertainty.

Error Estimate: Because the incidents are self-reported, there is a potential bias in the data. However, there is no reason to believe that the bias will change from year to year

New/Improved Data or Systems: Not known at this time.

References: Poison Control Centers TESS (Toxic Exposure Surveillance System) http://www.aapcc.org/poison1.htm

FY 2009 Performance Measure:

- **Incidents per 100,000 potential risk events in population occupationally exposed to pesticides (PART measure)**

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the Toxic Exposure Surveillance System (TESS). Among the types of exposures reported are pesticide related exposures in both residential and occupational settings. The data collected include date of call, age, gender, location of exposure, route of exposure, substance exposed to, initial symptom assessment, treatment received and an

evaluation of the medical outcome. Symptoms are categorized as minor, moderate, or major with standard criteria for each category.

Data Sources:

Health Incident Data:
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

The Association of American Poison Control Centers (AAPCC) began collecting data for the purpose of identifying the leading hazards to humans from poisoning and to provide resources for the management of these exposures. Currently, the PCCs service approximately 98% of the nation.

Poison Control Centers are usually run by a hospital or university. Approximately 99% of the nation's Poison Control Centers (PCCs) send incident data to the Toxic Exposure Surveillance System (TESS). The national data collection system started in 1983. Each PCC receives a minimum of 10,000 calls annually. About 13% of calls are from health care providers treating patients and 87% of calls are from individuals who need assistance in managing an exposure to poison. From 1993-1996, 92% of reported exposures occurred in a residential setting. PCC collects data on exposures to any substance and pesticide poisonings make up about 3% of all cases. PCCs submit data to TESS 2 to 4 times per year.

Data from the PCC/TESS database will be used for the numerator.

The denominator number is calculated from several sources: Department of Labor's Bureau of Labor Statistics, which captures employment characteristics for the national workforce. The estimate of agricultural field workers is from the Department of Labor's National Agricultural Workers Survey; The denominator also uses EPA/OPP's annual report of Certified Applicators, and an estimate for the number of field entries by farmworkers from the 1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard.

Methods, Assumptions and Suitability: Trend analysis of the reported incidents could reveal problem chemicals and the effects of previous actions taken.

Calculation Description:

For the Numerator :
Universe of Occupationally Exposed Individuals:

1. Certified Applicators =	1,100,000
2. "Under the Supervision" Applicators (Assume 4 X CA) =	4,000,000
3. Other Occupational Pesticide Users =	2,500,000*

* = Bureau of Labor Statistics calculates there are 50,000,000 employees in non-agricultural fields that we believe utilize pesticides as part of their business (e.g., healthcare support; food preparation; building & grounds cleaning & maintenance; production; etc.). We assume that 5% of those employees apply pesticides.

4. Agricultural Farmworkers = 1,800,000

Potential Pesticide Risk Events:

For occupational users (Groups #1 - 3 above), we assume every pesticide application has the potential to create a pesticide incident with adverse health effects. We conservatively estimate each individual in those groups makes 4 pesticide applications per year. Therefore,

7,600,000 occupational users X 4 applications/year = 30,400,000 Potential Pesticide Risk Events/Year

Agricultural Farmworkers spend an average of 105 days/year in the field (1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard). We assume that 5% of field entries present potential risk from pesticide exposure. Therefore,

105 days per/year X 5% = 5.25 Potential Pesticide Risk Events/Year/Farmworker
5.25 X 1,800,000 Ag Farmworkers = 9,450,000 Potential Pesticide Risk Events/Year

30,400,000 + 9,450,000 = 39,850,000 Total Potential Pesticide Risk Events/Year

Occupational Pesticide Incidents:

The Poison Control Centers' Toxic Exposure Surveillance System recorded there were an average of 1388 occupational pesticide incidents with adverse health impacts in 2001 – 2003, the most recent data available.

RATE OF INCIDENTS PER POTENTIAL PESTICIDE RISK EVENTS PER YEAR

$$\frac{\text{1388 occupational pesticide incidents per}}{\text{39,850,000 potential pesticide risk events/year}} = \text{3.5 incidents per 100,000 potential pesticide risk events/year}$$

QA/QC Procedures: PCCs must be certified by the American Association of Poison Control Centers (AAPCC). To be certified a PPC must have a board certified physician on call at all times, have AAPCC certified specialists available to handle all calls, have a comprehensive file

of toxicology information readily available, maintain SOPs, keep records on all cases and have an ongoing quality assurance program.

Data Quality Review: For the incident data, regular case reviews and audits are scheduled to assure quality assurance of data collected by the Poison Centers. All data in the TESS system is subject to quality assurance requirements, including occupational incidents.

Data Limitations: The data in PCC/TESS originates from the public or health-care providers voluntary communications to the PCCs. Some number of pesticide-induced illnesses go unreported due to difficulty in diagnosis, symptoms that are non-specific to pesticides, and the fact that the public may not report. The under-reporting is considered a self-reporting bias.

The denominator data for non-agricultural workers is from 2004; more recent BLS data are not available.

Error Estimate: The number of potential risk events/year is most likely underestimated, because we used conservative estimates in estimating the potential number of events. For example, we estimated only 4 applications per year per individual which is likely to be a very low estimate.

New/Improved Data or Systems: Not known at this time.

References:

American Association of Poison Control centers: http://www.aapcc.org/poison1.htm

Department of Labor's National Agricultural Workers Survey: http://www.dol.gov/asp/programs/agworker/naws.htm

Department of Labor's Bureau of Labor Statistics: Occupational Employment and Wages, November 2004: http://www.bls.gov/news.release/archives/ocwage_11092005.pdf

EPA/OPP's annual report of Certified Applicators: http://www.epa.gov/oppfead1/safety/applicators/data.htm

1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard

FY 2009 Performance Measure:

- **Reduced cost per pesticide occupational incident avoided (PART efficiency)**

Performance Database:

Health Incident Data
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

The Association of American Poison Control Centers (AAPCC) began collecting data for the purpose of identifying the leading hazards to humans from poisoning and to provide resources for the management of these exposures.

Poison Control Centers are usually run by a hospital or university. Approximately 99% of the nation's Poison Control Centers (PCCs) send incident data to the Toxic Exposure Surveillance System (TESS), the national data collection system started in 1983. Each PCC receives a minimum of 10,000 calls annually. About 13% of calls are from health care providers treating patients and 87% of calls are from individuals who need assistance in managing an exposure to poison. From 1993-1996, 92% of reported exposures occurred in a residential setting. PCC collects data on exposures to any substance and pesticide poisonings make up about 3% of all cases. PCCs submit data to TESS 2 to 4 times per year.

Cost Data
Cost estimates are based on the President's budget and State and Regional Assistance Grants funding documents.

Data Source:

Health Incident Data
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

Most cases in TESS are submitted by certified PCCs through their staff, and are received from the public.

Methods, Assumptions and Suitability: This efficiency measure is based on the annual number of occupational pesticide incidents. A critical assumption is that EPA's pesticide program's efforts have a direct impact on the decline of pesticide incidents and that additional external factors have no effect on the number of pesticide incidents (e.g., all influences on occupational incidents arise from the program's efforts). From recent assessments, we do believe that occupational poisonings are declining and that OPP's actions contribute significantly to the reduction.

Calculation:

Worker Safety Resources ($)	=	Cost /Pesticide Occupational
Pesticide Occupational Incidents Avoided		Incident Avoided

Worker Safety Resources = Value of extramural and Full Time Employee (FTE) Resources from the President's Budget request identified as supporting EPA Headquarters worker protection activities; and State and Regional Assistance Grants (STAG) monies. Does not include headquarters resources for worker protection in the Registration/Re-Registration/Registration Review programs, because would result in double-counting. Regional resources for field programs are in the form of FTEs, which are parsed differently into worker protection, water quality, and strategic agricultural initiatives by the Regions depending on their priority objectives. These data are not currently available. An additional complication is the fact that states provide substantial funding for these programs as well, and their contribution is not included here.

For recent years, annual STAG funds for worker safety (C&T and WP) total $6.6M. The President's Budget has remained relatively constant at $2.7M for Agricultural Worker Protection and $2.7M for Pesticide Applicator per year, for an average of $12M as the numerator in the baseline calculation.

Pesticide Occupational Incidents Avoided = Using pesticide incident data from Poison Control Centers' Toxic Exposure Surveillance System, OPP established a baseline for average incidents per year. Use of an average of three years is appropriate to account for inconsequential fluctuations in the counts.

This measure will be tracked as follows: we will review annual occupational incident data and compare it with the rolling average for the baseline. If the average number of incidents from the most recent three years is below the baseline, the difference will be the incidents avoided for use in the calculation.

QA/QC Procedures: Most cases in TESS are submitted by certified PCC. Certification of the PCC requires that there be board certified physicians with expertise in toxicology on-call at all times, poison information specialists available to handle calls, access to a major medical library, guidelines for follow-up of each case to determine the patient's final disposition or medical outcome. Taken together these criteria help to assure the quality of the data.

Each Poison Control Center uses standard format for data collection. Standard data elements include location of victim at the time of exposure, substance exposed to, route of exposure, initial symptom assessment, and evaluation of medical outcome after case follow up. Cases with symptoms are categorized by severity as minor, moderate, or major.

Data Quality Review: Trained PCC specialists review the case data and, based on the information provided and their knowledge of toxicology, doses, and timing of exposure, ascertain whether the incident was caused by pesticides.

Data Limitations: Experts believe pesticide poisonings are under-reported to surveillance sources, for reasons, including the symptoms of pesticide poisoning generally are difficult to identify; there are few biomarkers for pesticides; and because the exposed individual may not seek medical care or report their illness. Additionally, not all states require mandatory physician reporting, and those that do may have difficulty enforcing that requirement.

Error Estimate: As mentioned above, under-reporting is believed to be a problem in all pesticide incident data sets. There are a number of widely-ranging estimates for the amount of under-reporting, ranging from 25% to as much as a factor of a thousand.

New/Improved Data or Systems: OPP collects pesticide incident data under FIFRA section 6(a)2. FIFRA is the Federal Insecticide, Fungicide and Rodenticide Act; the statute which governs the program functions. Section 6(a)2 is mandatory reporting required of the registrants (registrants are those who have or seek registration of their pesticide products). However, details important to this measure are not routinely captured in this data set. We hope to improve the internal data systems that capture incidents reported by the regulated community. Currently, data are difficult to use and may not have needed detail. If these data were available, they could potentially be used to complement or replace the PCC/TESS data, depending on their quality.

References: none

FY 2009 Performance Measure:

- **Percent reduction in concentrations of pesticides detected in general population (PART measure)**

Performance Database: The Agency will use the Centers for Disease Control's (CDC's) National Health and Nutrition Examination Survey (NHANES) data from 1999-2002 as the baseline. For this measure, the Agency intends to report on the changes in levels of organophosphate pesticides at the 50^{th} percentile (or median.) This group of chemicals was selected for a number of reasons. A large proportion of data collected from the general population are detectable residues (or their metabolites) for the organophosphate pesticides. In addition, the metabolites for which the analyses are performed are derived exclusively from the OP pesticides. The Agency selected a measure based on central tendency because it provides an overall picture of trends and is not distorted by anomalies in the data. However, the Agency intends to follow a range of metrics to more fully understand trends in the data. The annual targets will change every two years because each survey is performed over a two year period.

Data Sources: NHANES (see above)

Methods, Assumptions and Suitability: The NHANES data were selected because the surveys provide a statistically representative data set for the entire U.S. population. It is an ongoing program, with funding from numerous cooperating Federal agencies. The data are based on measurement of chemical levels in blood and urine.

QA/QC Procedures: This large scale survey is performed in strict compliance with CDC QA/QC procedures.

Data Quality Review: The measure will utilize NHANES data. NHANES is a major program of the National Center for Health Statistics (NCHS). NCHS is part of the Centers for Disease Control and Prevention (CDC), U.S. Public Health Service, and has the responsibility for producing vital and health statistics for the Nation. The National Center for Health Statistics (NCHS) is one of the Federal statistical agencies belonging to the Interagency Council on Statistical Policy (ICSP). The ICSP, which is led by the Office of Management and Budget (OMB), is composed of the heads of the Nation's 10 principal statistical agencies plus the heads of the statistical units of 4 nonstatistical agencies. The ICSP coordinates statistical work across organizations, enabling the exchange of information about organization programs and activities, and provides advice and counsel to OMB on statistical activities. The statistical activities of these agencies are predominantly the collection, compilation, processing or analysis of information for statistical purposes. Within this framework, NCHS functions as the Federal agency responsible for the collection and dissemination of the Nation's vital and health statistics. Its mission is to provide statistical information that will guide actions and policies to improve the health of the American people.

To carry out its mission, NCHS conducts a wide range of annual, periodic, and longitudinal sample surveys and administers the national vital statistics systems.

As the Nation's principal health statistics agency, NCHS leads the way with accurate, relevant, and timely data. To assure the accuracy, relevance, and timeliness of its statistical products, NCHS assumes responsibility for determining sources of data, measurement methods, methods of data collection and processing while minimizing respondent burden; employing appropriate methods of analysis, and ensuring the public availability of the data and documentation of the methods used to obtain the data. Within the constraints of resource availability, NCHS continually works to improve its data systems to provide information necessary for the formulation of sound public policy. As appropriate, NCHS seeks advice on its statistical program as a whole, including the setting of statistical priorities and on the statistical methodologies it uses. NCHS strives to meet the needs for access to its data while maintaining appropriate safeguards for the confidentiality of individual responses.

Three web links to background on data quality are below:
http://www.cdc.gov/nchs/about/quality.htm
http://www.cdc.gov/nchs/data/nhanes/nhanes_01_02/lab_b_generaldoc.pdf#search=%22quality%20control%20NHANES%22
http://www.cdc.gov/nchs/data/nhanes/nhanes_03_04/lab_c_generaldoc.pdf#search=%22quality%20NHANES%22

Data Limitations: Some limitations include that not all pesticides are included, it is a measure of exposure instead of risk, and there is a time-lag between EPA actions and the CDC's analysis of the data.

Error Estimate: There is the potential of identifying metabolites that comes from both a pesticide and another source.

New/Improved Data or Systems: Not known at this time.

References: Third National Report on Human Exposure to Environmental Chemicals 2005, CDC/National Center for Environmental Health/Environmental Health Laboratory http://www.cdc.gov/nchs/about/nhanes

FY 2009 Performance Measure:

- **Average cost and average time to produce or update an Endangered Species Bulletin (PART efficiency)**

Performance Database: The Bulletins Live! application is enabled by a multi-user relational database system that maintains a permanent archive with dates of the draft and final content for each endangered species protection Bulletin that is created or updated in the system. When the Bulletins Live! application is made available to the public, EPA will take over the complete Bulletin production process, which is currently carried out by the United States Geological Survey (USGS) staff through an Interagency Agreement (see below). Additionally, tracking and summary reporting of all endangered species mitigation actions including the time between which a decision is made to issue a Bulletin and its availability to the public will be made available as a part of the OPP "PRISM" information system that is planned for development in FY 2007. This system will track the staff working on mitigation development and bulletin production, and the time spent on these activities, allowing for a calculation of the cost per bulletin issued with Bulletins Live!

Data Source: The data necessary to track progress towards the targets for this measure are currently being collected by EPA. The Bulletins are being developed for EPA by the U.S. Geological Survey (USGS) Cartography and Publishing Program under an Interagency

Agreement (IAG) with OPP. The data will be collected annually through the end-of-year report under the Interagency Agreement (IAG). The baseline year will be 2004 cost and time averages ($4000.00 and 100 hours per Endangered Species Bulletin production or update).

Methods, Assumptions and Suitability: These Bulletins are a critical mechanism for ensuring protection of endangered and threatened species from pesticide applications Bulletins are legally enforceable extensions to pesticide labels that include geographically specific use limitations for the protection of endangered species. The faster the Bulletins can be developed, the earlier the protections are available to endangered and threatened species. Similarly, the less it costs to produce the Bulletins, the more Bulletins can be produced within available budget and the greater the impact on saving endangered and threatened species.

This measure is calculated as follows:

> 100 – [(Sum of the costs to produce or update Endangered Species Bulletins in current 12 month period/number of bulletins produced or updated in the same 12 month period)/(Sum of the costs to produce or update Endangered Species Bulletins in previous 12 month period) X 100] This is intended to be a measure that captures improvements in current year cost per bulletin vs. previous year cost per bulletin.
>
> 100 – [(Sum of the time in hours to produce or update Endangered Species Bulletins in current 12 month period/number of bulletins produced or updated in the same 12 month period)/(Sum of the time in hours to produce or update Endangered Species Bulletins in previous 12 month period/number of bulletins produced or updated in the previous 12 month period) X 100]

QA/QC Procedures: EPA adheres to its approved Quality Management Plan to ensure the overall quality of data in the Bulletins Live! system. Bulletins pass through a multi-level quality control and review process before being released to the public. After the initial Bulletin is created by trained staff in the Endangered Species Protection Program, the draft is automatically routed in the system to a senior staff member who reviews the information in the Bulletin as a quality control check. After this Agency review, Bulletins are then subject to review and comment by Regional and State regulatory partners responsible for different aspects of the field implementation program and Bulletin enforcement.

Data Quality Reviews: Data quality reviews for the Bulletins themselves are ongoing through the QA/QC methodology described above. Data quality reviews for components of the measure (time per bulletin and cost per bulletin) will be carried out by the Project Officers who manage the Bulletins Live! and PRISM systems.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: The web-based Bulletins Live! system will facilitate the expedited production and delivery of endangered species protection Bulletins as compared to the 2004 baseline.

References:
Endangered Species Protection Program website and Bulletins Live!: http://www.epa.gov/espp; QMP: Quality Management Plan for the Office of Pesticides Program, February 2006; Endangered Species Act.

FY 2009 Performance Measure:

- **Reduce cost per acre using reduced risk pest management practices compared to the grant and/or contract funds expended on environmental stewardship (PART efficiency)**

Performance Database: Strategic Agricultural Initiative (SAI) database contains the SAI grants funds and acreage data. We are going to track the number of acres, by particular crop, under reduced risk pest management that were part of a grant and/or contract. This database is currently on the web site of our cooperator, the American Farmland Trust. Eventually, Pesticide Environmental Stewardship Program (PESP) data will be included. PESP data are those reported to EPA in grant reports. We look at the adoption rate of reduced risk pesticides and compare it to the cost of the grant. The performance data are the acres impacted by the project verses the amount of grant or contract funds.

Data Source: Reports from grantees and contractors will be used as well as available databases to track the adoption of safer pest management practices. Such data sources include the USDA National Agricultural Statistics Service's surveys, Doane Marketing Research data, and pesticide usage records provided by user groups. Agricultural pesticide user groups who are members of PESP frequently report their use of safer pest management practices as part of their annual reports

Methods, Assumptions and Suitability: Each grantee or contractor is required to provide reports on their project including the success of adoption of safer pest management practices. For SAI grants, the SAI Coordinator in each of the 10 EPA Regional Offices enters the results from the SAI grants into the SAI database. The SAI Coordinator at EPA Headquarters encourages the Regional Coordinators to do this in a timely fashion. EPA Headquarters' Project Officer of the PESP grant serves the same function, making sure interim and final reports are provided to EPA without delay. EPA will track the adoption of new practices using publicly and commercially available databases, such as those described above. At times, data also are available on the adoption of a particular biopesticide or other reduced risk pesticide from the

registrant of that product or from a user group that is adopting the new technology. This data can be very useful in tracking adoption in the early stages or in cases where little data is available, such as for minor crops. Data supplied by registrants can be compared to information supplied to EPA under Section 7 of FIFRA to identify major errors, but it would be hard to identify minor errors or flaws in the data.

QA/QC Procedures: EPA QA/QC procedures are followed for each grant and/or contract where environmental data is being collected. Part of the Agency's Quality Management Plan requires that grantees and/or contractors have a QA/QC program in place before the grant/contract is awarded. A staff member, typically the project officer for the grant or contract, typically often conducts onsite visits every year to ensure QA/QC procedures is being followed. Typically, field trials and demonstrations are visited by the Regional SAI Coordinators or the EPA grantee for PESP work. Data from other internal and external sources, where available, will be used to determine the validity of the information provided by registrants and grower groups.

Data Quality Reviews: Staff and management of the Environmental Stewardship Branch and the Regional SAI Coordinators will perform data quality reviews under the leadership of program QA/QC officers.

Data Limitations: Major pesticide usage surveys will likely miss minor usages. Voluntary reporting by grantees and grower groups on the use of their reduced risk pest management practices introduces more error/bias than if a statistically valid sample were taken. However, funding and managing this kind of sample survey will be a challenge.

Error Estimate: Error estimates for established databases such as Doane and NASS surveys are documented by these organizations in their survey reports. Audits of grants are intended to reduce errors, but best estimates may be relied upon when statistically valid samples are not available.

New/Improved Data or Systems: EPA will improve the existing SAI database by including PESP data or will create a comparable database to track the PESP data.

References:
http://www.epa.gov/oppbppd1/PESP/ and
http://www.aftresearch.org/sai/collaborations

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Register reduced-risk pesticides, including biopesticides**
- **New Chemicals (Active Ingredients)**
- **New Uses**
- **Percent reduction in review time for registration of conventional pesticides (Long-term PART efficiency measure)**
- **Maintain timeliness of Section 18 Decisions**

Performance Database: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System) consolidates various pesticides program databases. It is maintained by the EPA and tracks regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration. In addition to tracking decisions in OPPIN/PRISM, manual counts are also maintained by the office on the registrations of reduced risk pesticides. Results for reduced risk pesticides, new active conventional ingredients, and new uses have been reported since 1996. The results are calculated on a fiscal year (FY) basis. For antimicrobial new uses, results have been reported since FY 2004 on a FY basis. S18 timeliness was reported on a FY basis for the first time in FY 2005.

Data Source: Pesticide program reviewers update the status of the submissions and studies as they are received and as work is completed by the reviewers. The status indicates whether the application is ready for review, the application is in the process of review, or the review has been completed.

Methods, Assumptions and Suitability: The measures are program outputs which when finalized, represent the program's statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment, and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, registration outputs do provide a means for reducing risk by ensuring that pesticides entering the marketplace meet the latest health standards, and as long as used according to the label are safe.

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). All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) new safety standards. All risk assessments are subject to public and

scientific peer review. The office adheres to its Quality Management Plan (May 2000) in ensuring data quality and that procedures are properly applied.

Data Quality Review: These are program outputs. EPA staff and management review the program outputs in accordance with established policy for the registration of reduced-risk pesticides as set forth in Pesticide Regulation Notice 97-3, September 4, 1997.

Data Limitations: None. All required data must be submitted for the risk assessments before the pesticide is registered. If data are not submitted, the pesticide is not registered. As stated above, a reduced risk pesticide must meet the criteria set forth in PRN 97-3 and all registrations must meet FQPA safety requirements. If a pesticide does not meet these criteria, it is not registered. If an application for a reduced risk pesticide does not meet the reduced risk criteria, it is reviewed as a conventional active ingredient.

Error Estimate: N/A

New/Improved Data or Systems: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System), which consolidates various pesticides program databases, will reduce the processing time for registration actions.

References: FIFRA Sec 3(c)(5); FFDCA Sec 408(a)(2); EPA Pesticide Registration Notice 97-3, September 4, 1997; Food Quality Protection Act (FQPA) 1996; OPP Quality Management Plan, May 2000); Endangered Species Act.

FY 2009 Performance Measure:

- **Product Reregistration**

Performance Database: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System) consolidates various EPA program databases. It is maintained by the EPA and tracks regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's reregistration. In addition to tracking decisions in OPPIN/PRISM, manual counts are also maintained by the office on the reregistration decisions. Decisions are logged in as the action is completed, both for final decisions and interim decisions.

Data Source: EPA's Pesticides Program staff and managers.

Methods, Assumptions and Suitability: The measures are program outputs which represent the program's statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of

risk reduction, they do provide a means for reducing risk in that the program's safety review prevents dangerous pesticides from entering the marketplace.

QA/QC Procedures: All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) new safety standards. All risk assessments are subject to public and scientific peer review. The office adheres to the procedures for quality management of data as outlined in its QMP approved May 2000.

Data Quality Review: Management reviews the program counts and signs off on the decision document.

Data Limitations: None known.

Error Estimate: N/A. There are no errors associated with count data.

New/Improved Data or Systems: The OPPIN/PRISM, which consolidates various pesticides program databases, will contribute to reducing the processing time for reregistration actions.

References: EPA Website http://www.epa.gov/pesticides EPA Annual Report 2002 EPA Number 735-R-03-001; 2003 Annual Performance Plan OPP Quality Management Plan, May 2000; Endangered Species Act.

FY 2009 Performance Measure:

- **Percentage of agricultural acres treated with reduced-risk pesticides (PART measure)**

Performance Database: EPA uses an external database, Doane Marketing Research data, for this measure. The data have been reported for trend data since FY 2001 on an FY basis.

Data Source: Primary source is Doane Marketing Research, Inc. (a private sector research database). The database contains pesticide usage information by pesticide, year, crop use, acreage and sector.

Methods, Assumptions and Suitability: 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). EPA's statistical and economics staff review data from Doane.

Information is also compared to prior years for variations and trends as well as to determine the reasons for the variability.

Doane sampling plans and QA/QC procedures are available to the public at their website. More specific information about the data is proprietary and a subscription fee is required. Data are weighted and a multiple regression procedure is used to adjust for known disproportionalities (known disproportionality refers to a non proportional sample, which means individual respondents have different weights) and ensure consistency with USDA and state acreage estimates.

QA/QC Procedures: All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) new safety standard. All risk assessments are subject to public and scientific peer review. Doane data are subject to extensive QA/QC procedures, documented at their websites. In ensuring the quality of the data, EPA's pesticide program adheres to its Quality Management Plan (QMP), approved May 2000.

The main customers for Doane pesticide usage data are the pesticide registrants. Since those registrants know about sales of their own products, they have an easy way to judge the quality of Doane provided data. If they considered the quality of the data to be poor, they would not continue to purchase the data.

Data Quality Review: Doane data are subject to extensive internal quality review, documented at the website. EPA's statistical and economics staff review data from Doane. Information is also compared to prior years for variations and trends as well as to determine the reasons for the variability. For some crops and states, comparisons are also made with a more limited pesticide usage database from the National Agricultural Statistics of USDA.

Data Limitations: Doane data are proprietary; thus in order to release any detailed information, the Agency must obtain approval. There is a data lag of approximately 12-18 months, due to the collection of data on a calendar year (CY) basis, time required for Doane to process data, lead time for EPA to purchase and obtain data, plus the time it takes to review and analyze the data within the office's workload.

Error Estimate: Error estimates differ according to the data/database and year of sampling. This measure is compiled by aggregating information for many crops and pesticides. While considerable uncertainty may exist for a single pesticide on a single crop, pesticide use data at such a highly aggregated level are considered quite accurate. Doane sampling plans and QA/QC procedures are available to the public at their website. More specific information about the data is proprietary and a subscription fee is required. Data are weighted and multiple regression procedure is used to adjust for known disproportionalities and ensure consistency with USDA and state acreage estimates.

New/Improved Data or Systems: These are not EPA databases; thus improvements are not known in any detail at this time.

References: EPA Website; EPA Annual Report; Annual Performance Plan and Annual Performance Report, http://www.ams.usda.gov/science/pdp/download.htm; Doane Marketing Research, Inc.: http://www.doanemr.com; http://www.usda.gov/nass/pubs and http://www.usda.nass/nass/nassinfo; FFDCA Sec 408(a)(2); EPA Pesticide Registration Notice 97-3, September 4, 1997; Endangered Species Act.

FY 2009 Performance Measure:

- **Annual number of chemicals with proposed Acute Exposure Guideline Levels (AEGLs) values. (PART measure)**

Performance Database: Performance is measured by the annual number of chemicals with "Proposed" AEGL values as recorded in the AEGL Chemical Status sans Structure Access 2000 database containing the approval dates for proposed AEGL values. The results are calculated on a fiscal year basis.

Data Source: EPA manages a Federal Advisory Committee Act (FACA) committee that reviews short term exposure values for extremely hazardous chemicals. The supporting data, from both published and unpublished sources and from which the AEGL values are derived, are collected, evaluated, and summarized by FACA Chemical Managers and Oak Ridge National Laboratory's scientists. Proposed AEGL values are published for public comment in the Federal Register. After reviewing public comment, interim values are presented to the AEGL Subcommittee of the National Academy of Sciences (NAS) for review and comment. After review and comment resolution, the National Research Council under the auspices of the National Academy of Sciences (NAS) publishes the values as final. Although proposed AEGLs are not considered final until so designated by the NAS, the proposed values are suitable for many purposes. This performance measure is tied to proposed values rather than to final ones because actions through the proposal stage of the AEGL process are largely under EPA's control whereas subsequent action to finalize the AEGL values is largely a matter within NAS jurisdiction.

Methods and Assumptions: The work of the National Advisory Committee's Acute Exposure Guideline Levels (NAC/AEGL, formally chartered under the Federal Advisory Committee Act) adheres to the 1993 U.S. National Research Council/National Academies of Sciences (NRC/NAS) publication *Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances*. NAC/AEGL, in cooperation with the National Academy of Sciences' Subcommittee on AEGLs, has developed standard operating procedures (SOPs), which are followed by the program. These have been published by the National Academy Press and are referenced below. The number of AEGL values approved as "proposed" by the NAC/AEGL

FACA Committee represents the measure of performance. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: This output measure supports the long term goal of assigning proposed Acute Exposure Guideline Levels for all priority chemicals by 2011.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. QA/QC procedures, specific to AEGLs, include public comment via the Federal Register process; review and approval by the FACA committee; and review and approval by the NAS/AEGL committee and their external reviewers.

Data Quality Review: Not applicable. The counts used as a basis for this measure are fully transparent.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting this measure.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: Access databases, spreadsheets and other files are maintained and improved on an ongoing basis. A new database is being developed to document rationales used to develop AEGL values. Once completed, this new database should enhance the efficiency of AEGL development.

References: Standing Operating Procedures for Developing Acute Exposure Guideline Levels for Hazardous Chemicals, National Academy Press, Washington, DC 2001 (http://www.nap.edu/books/030907553X/html/). NRC (National Research Council). 1993. Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances. Washington, DC: National Academy Press.
AEGL Program website at http://www.epa.gov/oppt/aegl

FY 2009 Performance Measure:

- **Percent reduction from baseline year in total EPA cost per chemical for which Proposed AEGL value sets are developed (PART efficiency measure)**

Performance Database: OPPT maintains records on AEGL program income, expenditures and carryover from one year to the next, and on the number of FTEs allocated to the program. Information from these records is aggregated to determine total EPA cost per chemical for which

a proposed AEGL data set is tracked through a GPRA and Budget Accomplishment Word document. The denominator of the measure – number of proposed AEGL value sets – is tracked using the AEGL Chemical Status sans Structure Access 2000 database containing the approval dates for proposed AEGL values.

Data Source: EPA manages a Federal Advisory Committee Act (FACA) committee that reviews short term exposure values for extremely hazardous chemicals. The supporting data, from both published and unpublished sources and from which the AEGL values are derived, are collected, evaluated, and summarized by FACA Chemical Managers and Oak Ridge National Laboratory's scientists. Proposed AEGL values are published for public comment in the Federal Register and then referred to the National Academies of Science (NAS) for further review and action. Although proposed AEGLs are not considered final until so designated by the NAS, the proposed values are suitable for many purposes. This performance measure is tied to proposed values rather than to final ones because actions through the proposal stage of the AEGL process are largely under EPA's control whereas subsequent action to finalize the AEGL values is largely a matter within NAS jurisdiction.

Methods and Assumptions: The methods involved in developing and reporting on this performance measure consist of simple computational steps performed on data relating to AEGL cost and accomplishment. For these computational steps it is necessary to track the number of FTEs assigned to the AEGL program and then find the associated labor cost by multiplying by standard cost-of-living factors. Likewise, the extramural cost associated with managing the program is determined by pulling cost and budgetary data from the relevant files, multiplying an appropriate percentage estimating the proportion of staff and contractor resources devoted to proposed AEGL development, summing as needed, and adjusting for inflation. One assumption underlying these computations is that the appropriate percentage is used to reasonably estimate the proposal stage's share of total cost devoted to AEGLs. Targets are based on what is considered reasonable and achievable.

The data used to estimate this performance measure represent all the costs for developing a proposed AEGL value set and are the most acceptable for this requirement. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: The indicators used for this measure are suitable because reductions in cost per AEGL value are expected to result from improvements in program implementation. These cost reductions will enable EPA to achieve the goals of the AEGL program with greater efficiency.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. Specific QA/QC procedures for AEGL development include

public comment via the Federal Register process; review and approval by the FACA committee; and review and approval by the NAS/AEGL committee and their external reviewers. AEGL documents are formally reviewed for QC purposes by designated contractors and EPA staff at critical junctures utilizing detailed checklists. Cost information from available records is also subjected to QA/QC controls.

Data Quality Review: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting this measure.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: Access databases, spreadsheets and other files are maintained and improved on an ongoing basis. A new database is being developed to document rationales used to develop AEGL values. Once completed, this new database should enhance the efficiency of AEGL development.

References: Standing Operating Procedures for Developing Acute Exposure Guideline Levels for Hazardous Chemicals, National Academy Press, Washington, DC 2001 (http://www.nap.edu/books/030907553X/html/). NRC (National Research Council). 1993. Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances. Washington, DC: National Academy Press. AEGL Program website at http://www.epa.gov/oppt/aegl

FY 2009 Performance Measures:

- **Number of cases of children aged 1-5 years with elevated blood lead levels (> 10 ug/dL) (PART measure)**
- **Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old. (PART measure)**

Performance Database: Data from the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (NHANES) is recognized as the primary database in the United States for national blood lead statistics. NHANES is a probability sample of the non-institutionalized population of the United States. Data are collected on a calendar year basis, and are currently released to the public in two year sets. Blood lead levels are

measured for participants who are at least one year old. The survey collects information on the age of the participant at the time of the survey.

Data Source: The National Health and Nutrition Examination Survey is a survey designed to assess the health and nutritional status of adults and children in the U.S. The survey program began in the early 1960s as a periodic study, and continues as an annual survey. The survey examines a nationally representative sample of approximately 5,000 men, women, and children each year located across the U.S. CDC's National Center for Health Statistics (NCHS) is responsible for the conduct of the survey and the release of the data to the public. NCHS and other CDC centers publish results from the survey, generally in CDC's Morbidity and Mortality Weekly Report (MMWR), but also in scientific journals. In recent years, CDC has published a National Exposure report based on the data from the NHANES. The most current National Report on Human Exposure to Environmental Chemicals was released July 2005, and is available at the Web site http://www.cdc.gov/exposurereport/. The Fourth National Exposure report is expected in the summer of 2008.

Methods and Assumptions: Detailed interview questions cover areas related to demographic, socio-economic, dietary, and health-related questions. The survey also includes an extensive medical and dental examination of participants, physiological measurements, and laboratory tests. Specific laboratory measurements of environmental interest include: metals (e.g. lead, cadmium, and mercury), VOCs, phthalates, organophosphates (OPs), pesticides and their metabolites, dioxins/furans, and polyaromatic hydrocarbons (PAHs). NHANES is unique in that it links laboratory-derived biological markers (e.g. blood, urine etc.) to questionnaire responses and results of physical exams. For this performance measure, NHANES has been recognized as the definitive source. Estimates of the number of children 1-5 years with an elevated blood lead level based on NHANES have been published by CDC, most recently in May 2005. (See http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm). Analytical guidelines issued by NCHS provide guidance on how many years of data should be combined for an analysis. The NHANES data directly estimate the values included in the two performance measures and are nationally recognized as the best source of this data. This data source measures blood levels in the same units (i.e., ug/dL) and at standard detection limits.

Suitability: The first measure supports the long-term goal of eliminating childhood lead poisoning as a public health concern by the year 2010. Data are collected on a calendar year basis and released to the public in two-year data sets. Data as of May 2005 reflecting 1999-2002 results, demonstrate progress towards the EPA's long-term target.

The second measure examines the disparities of blood lead levels in low-income children compared to non low-income children and uses this measure to track progress towards EPA's long-term goal of eliminating childhood lead poisoning in harder to reach vulnerable populations.

QA/QC Procedures: Background documentation is available at the NHANES Web site at http://www.cdc.gov/nchs/nhanes.htm. The analytical guidelines are available at the Web site http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

Data Quality Reviews: CDC follows standardized survey instrument procedures to collect data to promote data quality, and data are subjected to rigorous QA/QC review. Additional information on the interview and examination process can be found at the NHANES web site at http://www.cdc.gov/nchs/nhanes.htm.

Data Limitations: NHANES is a voluntary survey and selected persons may refuse to participate. In addition, the NHANES survey uses two steps, a questionnaire and a physical exam. There are sometimes different numbers of subjects in the interview and examinations because some participants only complete one step of the survey. Participants may answer the questionnaire but not provide the more invasive blood sample. Special weighting techniques are used to adjust for non-response. Seasonal changes in blood lead levels cannot be assessed under the current NHANES design. Because NHANES is a sample survey, there may be no children with elevated blood lead levels in the sample, but still some children with elevated blood lead levels in the population.

Error Estimate: Because NHANES is based on a complex multi-stage sample design, appropriate sampling weights should be used in analyses to produce estimates and associated measures of variation. Recommended methodologies and appropriate approaches are addressed in the analytical guidelines provided at the NHANES Web site http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

New/Improved Data or Systems: NHANES has moved to a continuous sampling schedule, scheduled release of data, and scheduled release of National Exposure reports by CDC.

References: 1) the NHANES Web site, http://www.cdc.gov/nchs/nhanes.htm; 2) the Third National Report on Human Exposure to Environmental Chemicals Web site, http://www.cdc.gov/exposurereport/; 3) Morbidity and Mortality Weekly Report (MMWR) article with the most recent estimate of the number of children with elevated blood lead levels, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm; 4) NHANES Analytical Guidelines, http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process (PART efficiency measure)**

Performance Database: The National Program Chemicals Division (NPCD) in the Office of Pollution Prevention and Toxics (OPPT) maintains the Federal Lead-Based Paint Program (FLPP) database, an electronic database of applications for certification by individuals and firms and applications for accreditation by training providers in states and tribal lands administered by a Federal lead program. The database provides a record of all applications for certification or accreditation for Federally-managed lead programs and the actions on those applications including final decisions and the multiple steps in the process used for measurement. The database is augmented by hard copy records of the original applications. EPA uses an Oracle Discoverer application to query the database to collect measurable performance data.

Data Source: The FLPP database is available internally to EPA Headquarters and Regional lead program staff who process the applications or oversee the processing. The database is maintained on an EPA Research Triangle Park (RTP), North Carolina server. Access to the database is granted by the Lead, Heavy Metals, and Inorganics Branch (LHMIB) in NPCD. Overall maintenance of the database and periodic improvements are handled by a contractor, currently ICF Consulting, located in Fairfax, Virginia. Data entry of application data is conducted by a second contractor, currently Optimus Corporation, located in Silver Spring, Maryland. Optimus Corporation maintains the file of the original applications. Each EPA Regional office maintains a file of copies of the original applications for that region.

Methods and Assumptions: Each complete application for certification or accreditation in Federally-managed states and tribal lands is processed (approximately 3000 per year). Certification is issued if all criteria are met. Some applications may be returned to the applicant or withdrawn by the applicant. For the applications that are fully processed, the length of time for EPA processing can be determined from date fields in the FLPP database. Accordingly, a census of all the fully processed applications for certification is periodically conducted, and the percentage of applications that took more than the prescribed number of days (e.g., 20) of EPA effort to process is computed based on this census. The census is conducted every six months, and the annual percentage calculated appropriately from the six month percentages. The data used to estimate this performance measure directly reflect all information that has been recorded pertaining to certification applications and are the most acceptable for this requirement. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: This measure tracks EPA Headquarters and Regional effort in processing lead-based paint certification and refund applications. This measure reflects an integral part of the Lead Program and ensures proper training for lead-based professionals. Data are available mid-

year and end-of-year and enable the program to demonstrate program efficiencies and enhance accountability.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. In addition, NPCD has an approved Quality Management Plan in place, dated January 2005. Applications and instructions for applying for certification and accreditation are documented and available at the Web site http://www.epa.gov/lead/pubs/traincert.htm. Documentation for the FLPP database is maintained internally at EPA and is available upon request.

Data Quality Reviews: The FLPP database is an internal EPA database, maintained for the purpose of processing and tracking applications. The database is interactive, and operational usage in processing applications by Headquarters and the Regional offices provides ongoing internal quality reviews. Further, EPA periodically checks contractors' data entry quality.

Data Limitations: Applications that were returned to the applicant or withdrawn by the applicant are not captured in the database and are out of scope for this performance measure. While the report is based on a census, it generates some duplicative data, which must be removed manually. Efforts are made to remove all duplicative data, while preserving valid data. However, because this is a non-automated process, a small amount of human error is possible. Some variability occurs due to unique conditions that vary by Region. Some Regions consistently process applications in less time than others. This variability may be due to factors such as badge printing capabilities and economies of scale.

Error Estimate: There is little or no sampling error in this performance measure, because it is based on a census of all applicable records.

New/Improved Data or Systems: The FLPP database is scheduled to undergo improvements in the next few years after the renovation, remodeling and painting rule is finalized. The performance measurement system will help determine if there is a change in timeliness after the improvements are implemented.

References: 1) Quality Management Plan for National Program Chemicals Division, January 2005; 2) FLPP database documentation; 3) URL for Applications and Instructions, http://www.epa.gov/lead/pubs/traincert.htm.

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities (PART measure)**
- **Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities [PART measure]**

Performance Database: The Risk Screening Environmental Indicators (RSEI) Model feeds these measures and uses annual reporting from individual industrial facilities along with a variety of other information to evaluate chemical emissions and other waste management activities. RSEI incorporates detailed data from EPA's Toxics Release Inventory (TRI) and Integrated Risk Information System, the U.S. Census, and many other sources. Due to a two year TRI data lag, most recent performance data are only available for FY 2005 and earlier. The data are based on calendar year.

Data Source: The RSEI model incorporates data on chemical emissions and transfers and facility locations from EPA's Toxics Release Inventory; chemical toxicity data from IRIS; facility location data from EPA's Facility Registry System (FRS); stack data from EPA's AIRS Facility Subsystem and National Emissions Trends Database and the Electric Power Research Institute; meteorological data from the National Climatic Data Center; stream reach data from EPA's Reach File 1 Database; stream discharge data from EPA's Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS); data on drinking water systems from EPA's Safe Drinking Water Information System; fishing activity data from U.S. Fish and Wildlife; exposure factors from EPA's Exposure Factor Handbook; and population data from the U.S. Census Bureau.

Methods and Assumptions: The RSEI Model generates unique, unitless, numerical values, known as "Indicator Elements" using the factors pertaining to surrogate dose, toxicity and exposed population for each release-exposure event. Indicator Elements are risk-related measures generated for every possible combination of reporting facility, chemical, release medium, and exposure pathway (inhalation or ingestion). Together these values form the building blocks to describe exposure scenarios of interest. Indicator Elements are like index numbers that can be compared to one-another but do not reflect *actual* risk, and are proportional to the modeled relative risk of each release (incrementally higher numbers reflect greater estimated risk). These Indicator Elements are summed in various ways to represent the risk-related results for releases users are interested in assessing. RSEI results are for comparative purposes and are only meaningful when compared to other scores produced by RSEI. These data are acceptable for use in performance measurement as they are national data reflecting releases and transfers of chemicals from manufacturing facilities, including a number of high production volume chemicals i.e., the data of interest for this measure.

Suitability: The first measure supports the Chemical Risk Review and Reduction program's goal to reduce risk from new and existing chemicals. This measure provides a suitable year to year comparison against a long term goal of 50% reduction in the RSEI index. The second measure supports the long term goal to reduce the RSEI index for HPV chemicals 45% by 2011. This measure provides a suitable year to year comparison against this goal and looks specifically at the reduction of risk for the subset of TRI chemicals that are also HPV chemicals. The year to year comparison can reveal trends in the risk from HPV chemicals over time. Despite a two year lag in TRI data, annual comparisons of overall RSEI results (first measure) and RSEI HPV results (second measure) can reveal trends in chemical risk over time. Further, depending on how the user wishes to aggregate data, RSEI can also address trends nationally, regionally, by state or smaller geographic areas.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. Additionally because TRI facilities self-report release data and occasionally make errors. TRI has quality control functions and an error-correction mechanism for reporting such mistakes. Finally during each RSEI update, the output data are checked against TRI data for consistency, and the results are compared against previous years' RSEI results.

Data Quality Reviews: RSEI depends upon a broad array of data resources, each of which has completed a data-specific quality review process managed by the providers of the data sources. RSEI includes data from the many sources listed in "Data Sources", above. All data are collected for regulatory or programmatic purposes and are of sufficient quality to be used by EPA, other Federal agencies, and state regulatory agencies. Over the course of its development, RSEI has been the subject of three reviews by EPA's Science Advisory Board (SAB). The RSEI model has undergone continuous upgrading since the 1997 SAB Review. Toxicity weighting methodology was completely revised and subject to a second positive review by SAB (in collaboration with EPA's Civil Rights program); air methodology was revised and groundtruthed using New York data to demonstrate high confidence; water methodology has been revised in collaboration with EPA's Water program. When the land methodology has been reviewed and revised, EPA will have completed its formal, written response to the 1997 SAB Review.

Data Limitations: RSEI relies on facility-specific data (for parameters such as stack height, discharge stream reach, location) from EPA data sources. Where such data are not available, default assumptions are used, or in some cases, the release is not modeled. Offsite releases (from transfers of toxic chemicals) are particularly affected by a lack of reported TRI data, and while RSEI addresses this through a process that optimizes the available data, the data are limited and of uneven quality. In addition, toxicity data are not available for some of the less-toxic TRI chemicals. Releases to water are not available for Alaska, Hawaii, Puerto Rico and U.S. territories, and some releases to water (for reporting facilities and offsite facilities) may not be

modeled because of inadequate coverage in the stream reach data. It should also be noted that TRI data include releases only from TRI-reportable facilities for TRI-reportable chemicals. It does not include all releases from reporting facilities or all releases of TRI-reportable chemicals. TRI data may also have errors that are not corrected in the standard TRI QC process.

Error Estimate: In developing the RSEI methodology, both sensitivity analyses and groundtruthing studies have been used to address model accuracy (www.epa.gov/opptintr/rsei/. For example, groundtruthing of the air modeling performed by RSEI compared to site-specific regulatory modeling done by the state of New York showed virtually identical results in both rank order and magnitude. However, the complexity of modeling performed in RSEI, coupled with un-quantified data limitations, limits a precise estimation of errors that may either over- or under-estimate risk-related results.

New/Improved Data or Systems: The program regularly tracks improvements in other Agency databases (e.g., Safe Drinking Water Information System and Reach File databases) and incorporates updated data into the RSEI databases. Such improvements can also lead to methodological modifications in the model. Corrections in TRI reporting data for all previous years are captured by the annual updates to the RSEI model databases. EPA is now using data from the FRS to assign geographic locations to TRI facilities.

References: The methodologies used in RSEI were first documented for the 1997 review by the EPA Science Advisory Board. The Agency has provided this and other updated technical documentation on the RSEI Home Page.

U.S. EPA Office of Pollution Prevention and Toxics, Risk Screening Environmental Indicators Model (RSEI) Home Page. Internet: http://www.epa.gov/opptintr/rsei/

U.S. EPA Office of Pollution Prevention and Toxics, Risk Screening Environmental Indicators Model, Peer Reviews. Internet: http://www.epa.gov/oppt/rsei/pubs/faqs.html

U.S. EPA Office of Pollution Prevention and Toxics, RSEI Methodology Document. Internet: http://www.epa.gov/opptintr/rsei/pubs/method2004.pdf

U.S. EPA Office of Pollution Prevention and Toxics, RSEI User's Manual. Internet: http://www.epa.gov/opptintr/rsei/pubs/users_manual.pdf

U.S. EPA Office of Pollution Prevention and Toxics, RSEI Fact Sheet,. Internet: http://www.epa.gov/opptintr/rsei/pubs/factsheet_v2-1.pdf

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers or environment**

Performance Database: Implementation of this measure will require the use of several EPA databases: Confidential Business Information Tracking System (CBITS), pre-manufacture notice (PMN) CBI Local Area Network (LAN), 8(e) database for new chemicals called ISIS, and the Focus database. The following information from these databases will be used collectively in applying this measure:
• CBITS: Tracking information on Pre-Manufacture Notices (PMNs) received;
• PMN CBI LAN: Records documenting PMN review and decision, assessment reports on chemicals submitted for review. In addition, the information developed for each PMN is kept in hard copy in the Confidential Business Information Center (CBIC);
• ISIS: Data submitted by industry under the Toxic Substances Control Act (TSCA) Section 8(e). TSCA 8(e) requires that chemical manufacturers, processors, and distributors notify EPA immediately of new (e.g. not already reported), unpublished chemical information that reasonably supports a conclusion of substantial risk. TSCA 8(e) substantial risk information notices most often contain toxicity data but may also contain information on exposure, environmental persistence, or actions being taken to reduce human health and environmental risks. It is an important information-gathering tool that serves as an early warning mechanism;
• Focus Database: Rationale for decisions emerging from Focus meeting, including decisions on whether or not to drop chemicals from further review.

Measurement results are calculated on a fiscal-year basis and draw on relevant information received over the 12-month fiscal year.

Data Source: The Office of Pollution Prevention and Toxics (OPPT) is responsible for the implementation of the TSCA. The office will compare data submitted under TSCA Section 8(e) with previously-submitted new chemical review data (submitted under TSCA Section 5 and contained in the PMN). This comparison will determine the number of instances in which EPA's current PMN review practices would have failed to prevent the introduction of new chemicals or microorganisms into commerce which pose an unreasonable risk to workers, consumers or the environment. Inconsistencies between the 8(e) and previously-submitted new chemical review data will be evaluated by applying the methods and steps outlined below to determine whether the inconsistencies signify an "unreasonable risk."

Methods and Assumptions: EPA's methods for implementing this measure involve determining whether EPA's current PMN review practices would have failed to prevent the introduction of chemicals or microorganisms into commerce that pose an unreasonable risk to workers, consumers or the environment, based on comparisons of 8(e) and previously-submitted new chemical review data. The "unreasonable risk" determination is based on consideration of (1)

the magnitude of risks identified by EPA, (2) limitations on risk that result from specific safeguards applied, and (3) the benefits to industry and the public expected to be provided by the new chemical substance. In considering risk, EPA looks at anticipated environmental effects, distribution and fate of the chemical substance in the environment, patterns of use, expected degree of exposure, the use of protective equipment and engineering controls, and other factors that affect or mitigate risk. The following are the steps OPPT will follow in comparing the 8(e) data with the previously-submitted new chemical review data:

1. Match all 8(e) submissions in the 8(e) database with associated TSCA Section 5 notices. TSCA Section 5 requires manufacturers to give EPA a 90-day advance notice (via a pre-manufacture notice or PMN) of their intent to manufacture and/or import a new chemical. The PMN includes information such as specific chemistry identity, use, anticipated production volume, exposure and release information, and existing available test data. The information is reviewed through the New Chemicals Program to determine whether action is needed to prohibit or limit manufacturing, processing, or use of a chemical.
2. Characterize the resulting 8(e) submissions based on the PMN review phase. For example, were the 8(e) submissions were received: a) before the PMN notice was received by EPA, b) during the PMN review process, or c) after the PMN review was completed?
3. Review of 8(e) data focusing on 8(e)s received after the PMN review period was completed.
4. Compare hazard evaluation developed during PMN review with the associated 8(e) submission.
5. Report on the accuracy of the initial hazard determination.
6. Revise risk assessment to determine if there was an unreasonable risk based on established risk assessment and risk management guidelines and whether current PMN Review practices would have detected and prevented that risk.

Suitability: The databases used and the information retrieved are directly applicable to this measurement and therefore suitable for measurement purposes. This measure supports the New Chemical program's goal to ensure that new chemicals introduced into commerce do not pose unreasonable risks to workers, consumers, or the environment. This measure provides a suitable year to year comparison against this goal because supporting data and analysis are conducted on an annual basis, directly linking to this long-term goal.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003) and will ensure that those standards and procedures are applied to this effort.

Data Quality Reviews: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight. In addition, the National Pollution Prevention and Toxics

Advisory Council (NPPTAC), which consists of external experts providing independent review and direction to OPPT, has provided comment on this measure.

Data Limitations: There are some limitations of EPA's review which result from differences in the quality and completeness of 8(e) data provided by industry; for example, OPPT cannot evaluate submissions that do not contain adequate information on chemical identity. The review is also affected in some cases by a lack of available electronic information. In particular the pre-1996 PMN cases are only retrievable in hard copy and may have to be requested from the Federal Document Storage Center. This may introduce some delays to the review process.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error. OPPT will review all 8(e) submissions received in the year with corresponding previously-submitted new chemical review data, and not a sample of such submissions.

New/Improved Data or Systems: OPPT is currently developing the integrated, electronic Manage Toxic Substances (MTS) system that will provide real time access to prospective PMN review.

References: OPPT New Chemicals Program
http://www.epa.gov/opptintr/newchems/, TSCA Section 8(e) – Substantial Risk
"Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003.

FY 2009 Performance Measures:

- **Percent reduction from baseline year in average cost of TSCA Section 8(e) processing and searches. [PART efficiency measure]**
- **Percent reduction from baseline year in cost of managing PMN submissions through the Focus meeting as a percentage of baseline year cost. [PART efficiency measure]**

Performance Databases: EPA will rely on several principal databases to facilitate implementation of the TSCA Section 8(e) and new chemical submission efficiency measures:

- Confidential Business Information Tracking System (CBITS): CBITS allows users to access basic identifying and status information on each hard copy 8(e) notification and new chemical submission to EPA, track receipt of each hard copy submission as well as requests for copies of submissions or information therein, and to obtain data on number of hard copy submissions and requests for copies per fiscal year. CBITS is a paper system which will eventually be phased out in favor of MTS database (see below).
- Manage Toxic Substances (MTS) database: This is a new system that, when applied to 8(e) notifications and new chemical submissions in FY 2008, will enable users to receive,

process, and store electronic submissions of 8(e) notifications and new chemical submissions information, and accommodate subsequent searches and retrievals performed by EPA or contractor staff. The system will provide data on the number of electronic submissions per fiscal year and the number of searches and retrievals conducted electronically by accessing scanned documents.

Data Sources: The sources of data for this performance measure are the 8(e) notifications and new chemical submissions and the information summarized in the databases described above. No external data sources play a direct role in the calculation of measurement results, although the 8(e) notifications often make reference to external data sources in which the reported 8(e) information originally appeared.

Methods and Assumptions: The efficiency measure "Average cost of TSCA Section 8(e) processing and searches" is calculated by: (1) defining the baseline year (FY 2007) and developing baseline information expressed as the average time required to conduct 8(e) processing and searches in the baseline year; (2) converting average time to average cost measurements; (3) setting appropriate targets for outyears, reflecting increasing levels of efficiency; and (4) conducting actual measurements for fiscal years beginning with FY 2009, after electronic submissions, processing and searches begin. These steps can be summarized individually as follows:

(1) Obtain baseline data: FY 2007 baseline data were obtained for each of five distinct sub-measures that are combined additively to produce the single efficiency measure described here. These sub-measures and the associated average handling times for 8(e)'s are: (a) average time spent sorting mail for 8(e)'s in the Confidential Business Information Center (CBIC) – 5 minutes per 8(e); (b) average time spent processing 8(e)'s in the CBIC – 10 minutes per 8(e); (c) average time searching the CBITS and/or MTS databases – 20 minutes per 8(e); (d) average time spent retrieving 8(e)'s from the CBIC – 25 minutes per 8(e); and (e) average time spent retrieving 8(e)'s off the shelf and replacing them – 2 minutes per 8(e). Collectively, these sub-measures represent the complete activity profile for 8(e) processing and searches. The time estimates are based on interviews with key staff conducted by the program.

(2) Convert average time baseline to average cost: For sub-measures that describe tasks performed by EPA staff, average time estimates have been converted to average cost by taking the standard hourly rate for a biologist at grade 14, step 1; dividing by 60 to express the hourly rate in minutes; and multiplying the result by the average time estimate (in minutes), yielding the average cost per 8(e). Similar calculations are performed for sub-measures that describe contractor tasks, except that the hourly rate is obtained from actual experience under the applicable contract.

(3) Set targets for fiscal years: The gradual expansion of electronic reporting and scanning is the main factor driving the targeted improvement in the measure. Target setting is based on what is considered reasonable and achievable. Targets are expressed, preliminarily, as the expected percentage increase in electronic submissions or scanned

8(e)s from the baseline fiscal year and the amount of time required for handling of such materials.

(4) Conduct measurements: The final step in the measurement process is to perform the actual measurements for specific fiscal years. This is done by consulting the databases described earlier to determine the actual proportion of submissions and searches/retrievals that are electronic and the proportion that are non-electronic, and inserting these data into the appropriate average cost formula. For instance, with respect to the average sorting time measure, one substitutes the actual proportion of non-electronic submissions for the target of .95 and the actual proportion of electronic submissions for the target of .05, leaving all other numbers in the formula the same.

There are a number of facts and assumptions underlying the preceding methodology: (a) Baseline 8(e) submissions and searches are all conducted non-electronically; (b) The overall number of submissions and search requests will remain static over the three-year period; (c) Possible increases in contractor and EPA staff costs are disregarded; and (d) for the average time searching CBITS/MTS sub-measure, the cost of electronic searches is proportional to search time (i.e., 20 minutes / 5 minutes = baseline cost divided by 4 = $12.40/4 = $3.10). For the other sub-measures, the average time and average cost are zero. Note: Item (a) can be considered a fact, while items (b)-(d) are assumptions.

The calculation is the nearly the same for new chemical submissions. Just substitute "new chemical submissions" for "8(e)" above. The sub-measures and the associated average handling times for new chemical submissions are slightly modified. They are: (a) average time spent sorting and processing mail for new chemical submissions in the Confidential Business Information Center (CBIC) – 35 minutes per new chemical submission; and (b) average time searching and retrieving new chemical submissions – 45 minutes per new chemical submission. Collectively, these sub-measures represent the complete activity profile for new chemical submission processing and searches. The time estimates are based on interviews with key staff conducted by the program.

The performance measures are suitable efficiency measures because average cost takes into account all expenses involved. The sub-measures exhaust all activities which contribute to process and the associated costs. The data collected and analyzed represent the costs of 8(e) and new chemical processing and are the most acceptable data available for this measure. All data meet the QMP requirements and outcomes are reviewed by OPPT senior management.

Suitability: The indicators selected are suitable and appropriate because they reflect expected cost savings stemming from automation of the new chemical submission and 8(e) notification and review process. This represents EPA's progress toward its goal of improving program efficiency.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort.

Data Quality Review: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting these measures.

Error Estimate: Not applicable. The measures do not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: As mentioned above, the development and deployment of the new MITS (Manage Toxic Substances) database will enable users to track electronic submissions and handling of 8(e) and new chemical information. The system will provide data on the number of electronic submissions per fiscal year and the number of searches and retrievals conducted electronically by accessing scanned documents.

References: http://www.epa.gov/opptintr/tsca8e/

FY 2009 Performance Measures:

- **Cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization Reports completed [PART measure]**
- **Cumulative number of High Production Volume (HPV) chemicals with Risk-Based Decisions completed [PART measure]**

Performance Database: EPA uses a reporting spreadsheet called "Hazard Score and Data Gaps for High Production Volume (HPV) Chemicals to track the number of completed Screening Level Hazard Characterization Reports. The spreadsheet is located on the Office of Pollution Prevention and Toxics (OPPT) secure Local Area Network (LAN) drive (G:\HPV Hazard Characterization), with the working copy located on the Branch Chief's desktop. EPA uses a reporting spreadsheet called "Risk-Based Decisions for High Production Volume (HPV) Chemicals" to track the number of completed Risk Based Decisions and other developed products besides the Hazard Characterizations described above that contribute to those decisions, such as Fate Characterizations, Exposure Characterizations, and Risk Characterizations. The entire process associated with tracking chemicals through the Security and Prosperity Partnership (SPP) is also tracked through the High Production Volume Information System (HPVIS) database.

Data Source: The Screening Level Hazard Characterization Reports are completed by EPA staff based on submissions from chemical sponsors, and are completed for both U.S. HPVs and international Screening Information Data Set (SIDS) chemicals. Each screening level hazard characterization document represents a thorough review by qualified EPA personnel of the information provided by the submitter. Once a report is completed, as determined by senior scientist and management review, the spreadsheet is updated with the chemical name and date of completion. Screening Level Hazard Characterization Reports are combined with Exposure and Fate Characterizations based on information received from industry through the TSCA Inventory Update (IUR), leading to development of Risk Characterizations for each chemical. Division Directors within OPPT look holistically at this information and make a Risk-Based Recommendation. A Risk-Based Decision is then made by the OPPT Office Director and this integrated product is made publicly available through the HPV Program website and through HPVIS.

Methods and Assumptions: Hazard characterizations contribute to the Agency's ability to make Risk Based Decisions for HPV chemicals. The measures count the number of completed Hazard Characterization products (reports) at the time they are forwarded from the Risk Assessment Division to the Chemical Control Division, and the number of associated Risk-Based Decisions, measured at the time that the Office Director's decision is made final. Public posting of the Risk-Based Decision occurs approximately 2-4 weeks following decision finalization.

Suitability: Both of these measures are direct output measures of the Chemical Risk Review and Reduction program. These output measures support the outcome goal of reducing risk from HPV chemicals and are suitable for year to year as well as quarter to quarter comparisons. Hazard screening is an important first step in reducing risk and Risk-Based Decisions form the primary basis for taking action to reduce risk and improve human health.

QA/QC Procedures: All Pollution Prevention and Toxics programs operate under the Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines, last accessed on August 28th, 2006, and under the Pollution Prevention and Toxics Quality Management Plan (QMP) ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and the program will ensure that those standards and procedures are applied to this effort. Specifically, each Screening Level Hazard Characterization Report is reviewed by a senior staffer in the HPV program, the Branch Chief and the Division Director. The same review is applied to the count of cumulative Screening Level Hazard Characterization Reports completed.

Data Quality Reviews: Recent GAO reviews found that EPA does not routinely assess the risks of all existing chemicals and faces challenges in obtaining the information necessary to do so.

EPA has taken several steps to respond to these reviews including successful implementation of a process to routinely assess risks of existing chemicals. Data submissions have been received for 1,357 (97%) out of the 1,401 chemicals sponsored directly in the HPV Challenge Program. EPA scientists are currently utilizing the data to review HPV chemicals and develop screening-level Hazard Characterizations (HC). The screening-level HCs will be combined with Exposure Characterizations to create Screening–level Risk Characterizations, which will summarize any potential risks, identify scientific issues, and ensure transparency and risk communication. For chemicals of concern, voluntary and regulatory Risk-Based Decisions will then be implemented to achieve effective risk management.

Data Limitations: None.

Error Estimate: Not applicable. No models, assumptions or statistical methods are applied.

New/Improved Data or Systems: A content page is available for posting the Screening Level Hazard Characterization Reports publicly on EPA's HPV website http://iaspub.epa.gov/oppthpv/hpv_hc_characterization.get_report. A content page is under development for posting Risk Based Decisions publicly on EPA's HPV website. This website will post Risk-Based Decisions as an integrated product of Hazard, exposure and fate characterizations, which form the basis of the decision making process. The site will allow for review of the all products leading to the Risk-Based Decisions by the chemical sponsors and other interested parties and will contain instructions for submitting comments on the reports or underlying data. The comments will also be posted.

References:

"Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003.

GAO-05-458: Chemical Regulation: Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program, June 2005

GAO-06-1032T: Chemical Regulation: Actions Are Needed to Improve the Effectiveness of EPA's Chemical Review Program, August 2006

FY 2009 Performance Measure:

- **Number of risk management plan audits and inspections completed**

Performance Database: The EPA Annual Commitment System (ACS) is the database for the number of risk management plan audits.

4-Year Performance Data
Annual Performance Goals and Measures

Data Source: OSWER's Office of Emergency Management implements the Risk Management Program under Clean Air Act section 112(r). Facilities are required to prepare Risk Management Plans (RMPs) and submit them to EPA. In turn, EPA Headquarters (HQ) provides appropriate data to each Region and delegated State so that they have the RMP data for their geographical area. The Regions and delegated States conduct audits. About ten States have received delegation to operate the RMP program. These delegated States report audit numbers to the appropriate EPA Regional office so it can maintain composite information on RMP audits.

Methods, Assumptions and Suitability: Regions enter data into the Agency's Annual Commitment System. HQ prepares an annual report. Data are count data and not open to interpretation.

QA/QC Procedures: Data are collected from states by EPA's Regional offices, and reviewed at the time of Regional data entry. Data are regularly compared to similar data from the past to identify potential errors.

Data Quality Review: Data quality is evaluated by both Regional and Headquarters' personnel.

Data Limitations: Data quality is dependent on completeness and accuracy of the data provided by state programs and the EPA Regional offices.

Error Estimate: Not calculated.

New/Improved Data or Systems: N/A

Reference: N/A

FY 2009 Performance Measure:

- **Number of countries completing phase out of leaded gasoline**
- **Number of countries introducing low sulfur in fuels**

Performance Database: UNEP Partnership Clearinghouse; This performance measure tracks the number of countries that have phased out lead in gasoline. EPA works with the United Nations Environment Programme (UNEP) and other partners in the global Partnership for Clean Fuels and Vehicles to document the phase out of leaded gasoline and the reduction of sulfur levels in fuels worldwide. UNEP manages the Partnership Clearinghouse, which tracks the status of lead phase-out efforts and the status of sulfur reduction efforts in each country. The Partnership Clearinghouse also documents and verifies each country's implementation of lead phase out and sulfur reduction programs. The Partnership's data on lead phase-out can be found on the Partnership website at: http://www.unep.org/PCFV/Data/data.htm#leaded. The Partnership's data on sulfur levels in fuels, by country, can be found on the Partnership website at: http://www.unep.org/PCFV/Data/data.htm#sulphur

4-Year Performance Data
Annual Performance Goals and Measures

Data Source: The United Nations Environment Programme serves as the Clearinghouse for the Partnership for Clean Fuels and Vehicles and maintains a database of the status of country lead-phase out. Information from the database is posted on the Partnership website and updated periodically by UNEP -- at least every 6 months. UNEP collects the data from public and private sector partners and contacts government and industry experts in each country for verification before the data are posted. This data collection and cross-checking provide the best currently available information on country lead phase-out status and levels of sulfur.

Methods, Assumptions and Suitability: There is currently no available database on international leaded gasoline sales data or market penetration of alternative fuels, nor is there any international database on sulfur levels in fuels. Because of this gap, the Partnership made the decision to track the number of countries that have phased out lead and reduced sulfur because the data are more easily verifiable.

QA/QC Procedures: Experts at the Partnership for Clean Fuels and Vehicles verify the information in the Partnership Clearinghouse by contacting key people from industry and government within each country.

Data Quality Reviews: N/A

Data Limitations: There currently is no available database on leaded gasoline sales data or market penetration of alternative fuels. The Partnership made the decision to track the number of countries that have phased out lead and reduced sulfur in fuels, because the data are more easily verifiable. Fuel changes and lead phase- out are implemented in different ways in different countries, mostly by legislation. But having the legislation in place does not mean that lead has been eliminated from gasoline. Many countries have set dates for lead phase-out and sulfur reduction; however the Partnership tracks actual progress toward implementation.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: For additional information on the Partnership for Clean Fuels and Vehicles, see the Partnership website at http://www.unep.org/PCFV

For more information concerning the database for phase-out of leaded gasoline, see http://www.unep.org/PCFV/Data/data.htm#leaded

For additional information on sulfur levels, see
http://www.unep.org/PCFV/Data/data.htm#sulphur

Environmental Protection Agency

FY 2009 Annual Performance Plan and Congressional Justification

4-Year Performance Data
Annual Performance Goals and Measures

GOAL 4 OBJECTIVE 2

FY 2009 Performance Measures:

- **Number of Brownfields properties assessed [PART performance measure]**
- **Number of properties cleaned up using Brownfields funding**
- **Number of jobs leveraged from Brownfields activities**
- **Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields properties. [PART performance measure]**
- **Acres of Brownfields made ready for reuse [PART performance measure]**

Performance Database: The Assessment Cleanup and Redevelopment Exchange System (ACRES) tracks the performance information for the above measures.

Key fields related to performance measures include, but are not limited to:

Property Acreage
Assessment Completion Date
Cleanup Required
Cleanup Completion Date
Funding Leveraged
Jobs Leveraged

Performance measure data is tracked by fiscal year and will not be available for the FY 2009 PAR; data will be available for the FY 2010 PAR.

Data Source: Data are extracted from quarterly reports and property profile forms (http://www.epa.gov/brownfields/pubs/rptforms.htm) prepared by assessment, cleanup, revolving loan fund (RLF), job training, and State and Tribal 128 Voluntary Response Program cooperative agreement award recipients. Information on Targeted Brownfields Assessments is collected from EPA Regions.

Methods, Assumptions and Sustainability: Cooperative agreement recipients report performance data in quarterly reports and property profile forms. Data are reviewed by Regional EPA grant managers to verify activities and accomplishments. Given the reporting cycle and the data entry/QA period, there is typically a six month data lag for ACRES data.

Note that accomplishments reported by Brownfields Assessment Grantees, Brownfields Cleanup Grantees, Brownfields Revolving Loan Fund Grantees, Brownfields Job Training Grantees, Regional Targeted Brownfields Assessments, and State and Tribal 128 Voluntary Response Program Grantees all contribute towards these performance measures. "Number of Brownfields properties assessed" is an aggregate of assessments completed with Assessment Grant funding,

Regional Targeted Brownfields Assessment funding, and State and Tribal 128 Voluntary Response Program funding. "Number of Brownfields properties cleaned up" is an aggregate of properties cleaned up by RLF Grantees, Cleanup Grantees, and State and Tribal 128 Voluntary Response Program Grantees. "Number of Acres Made Ready for Reuse" is an aggregate of acreage assessed that does not require cleanup and acreage cleaned up as reported by Assessment Grantees, Regional Targeted Brownfields Assessments, Cleanup Grantees, RLF Grantees, and State and Tribal 128 Voluntary Response Program Grantees. "Number of cleanup and redevelopment jobs leveraged" is the aggregate of jobs leveraged by Assessment, Cleanup and RLF Grantees. "Amount of cleanup and redevelopment funds leveraged at Brownfields properties" is the aggregate of funds leveraged by Assessment, Cleanup and RLF Grantees.

QA/QC Procedures: Data reported by cooperative award agreement recipients are reviewed by EPA Regional grant managers for accuracy and to ensure appropriate interpretation of performance measure definitions. Reports are produced monthly with detailed data trends analysis.

Data Quality Reviews: No external reviews.

Data Limitations: All data provided voluntarily by grantees.

Error Estimate: NA

New/Improved Data or Systems: The Brownfields Program updated the Property Profile Form in FY 2006 to improve data collection and to expand the community of grantees completing the form. The Program launched and phased in an online reporting form in FY 2007.

References: For more information on the Brownfields program, see *Investing in Partnership, Possibility and People: A Report to Stakeholders from the US EPA Brownfields Program* (http://www.epa.gov/brownfields/news/stake_report.htm); assessment demonstration pilots and grants (http://www.epa.gov/brownfields/assessment_grants.htm); cleanup and revolving loan fund pilots and grants (http://www.epa.gov/brownfields/rlflst.htm); job training pilots and grants (http://www.epa.gov/brownfields/job.htm); and cleanup grants (http://www.epa.gov/brownfields/cleanup_grants.htm).

FY 2009 Performance Measure:

- **Number of communities with potential environmental justice concerns that achieve significant measurable environmental and/or public health improvement through collaborative problem-solving strategies.**

Performance Database: The Environmental Justice (EJ) Collaborative Problem-Solving (CPS) Cooperative Agreement (CA) Program within the Office of Environmental Justice (OEJ)

established and maintains the "EJ CPS CA Performance Tracking Database" in *Lotus Notes* to support the above program performance measure. The purpose of the program is to fund individual projects that each employ CPS strategies to improve environmental and/or public health in a specified community with environmental justice concerns. The database consists of specific information and data that are gathered from individual project files and entered by OEJ project officers who are assigned to one or more individual projects. To determine progress toward the above-stated program performance measure, OEJ periodically evaluates the information and data in the database and project files for completed projects using the consistent program procedures described below. Each completed project has the potential to be counted as one community that meets the program performance measure.

Data Source: The main sources of data for this program performance measure are semi-annual reports that are submitted to OEJ project officers by the recipients of EPA CPS CA projects. Each OEJ project officer enters data and information from these reports into the above-mentioned database. The most important type of data in the semi-annual reports are current values for one or more performance measures that are each associated with a project-specific performance goal and baseline. The units of these measured values, as well as the goals and baselines have been evaluated to determine if they are appropriate, reasonable, realistic and will ensure a strong logical linkage with the above-mentioned CPS CA program performance measure. As described below, the logical linkages are designed to ensure that the attainment of the project-specific goals for a given project serves as a reliable basis for concluding that the community named in the project has achieved "significant measurable environmental and/or public health improvement through collaborative problem-solving strategies."

Methods, Assumptions and Suitability: The projects in the EJ CPS CA program are awarded through a competitive review process in which applications are received in response to periodic requests for applications (RFAs). Each award recipient generally is a community-based organization that provides a project manager who reports to an OEJ project officer. The RFAs instruct applicants to define the specific potential environmental justice concern that their project proposes to address, and also instructs them to provide the outputs, outcomes, performance goals, and performance measures that are expected from their project. The process for evaluating these applications is guided by a published evaluation criteria and consensus among reviewers as to whether a given applicant has proposed a strong strategy that will "achieve significant measureable environmental and/or public health improvements through collaborative problem solving," as required by the above-listed program performance measure. After the projects are selected for award, each OEJ project officer works with the project manager in the awardees' organization to refine a priority list of outputs, performance measures and goals, and baseline measures that must be tracked at least monthly throughout the life of the project. These lists also are used to prepare the templates for the semi-annual progress reports, which are the primary sources of data for the program performance measure, as described in the previous section. In working with the project manager to establish these lists, each OEJ project officer uses program guidance to ensure that the performance measures, performance goals, and baseline

measures for the project are appropriate, reasonable, and realistic, and are consistent with OEJ procedures for determining when the project has met the program performance measure stated above. In addition, each OEJ project officer follows OEJ guidance to ensure that project performance measures and goals are being tracked accordingly throughout the life of the project. The units of measurement for the project-specific goals, measures, and baselines often vary between different projects depending on the types of community improvements being pursued by each project. However, the structure of the CPS CA program enables the OEJ project officers to coordinate with each other and with their respective CPS CA project manager to ensure the establishment of similar project goals between projects that are addressing similar types of environmental and/or public health improvements in their communities. The lists of indicators selected for each community vary due to the unique nature of the improvements the communities are trying to make. Examples of the types of improvements include but are not limited to:

- Increased coordination between healthcare providers and local government service organizations, and
- Reductions in exposures of community residents to:
  - Contaminated groundwater in their private wells,
  - Household toxins (such as asthma triggers and lead),
  - Workplace toxins (such products used in nail salons and floor-finishing businesses)
  - Emissions from nearby hog farm operations
  - Diesel emissions from nearby trucking operations.

Some of the key measures used to track these improvements include, but are not limited to numbers of:

- Patients newly referred to a specific government service organization by project-trained healthcare workers
- Participants completing a specific training on how to reduce their exposure to toxins
- Participants who commit to making one or more behavior changes
- Participants observed to have made one or more behavior changes
- Households with reduced exposures
- Business owners who commit to one or more specific behavior changes, such as modifying their operations to reduce releases of pollutants
- New regulations, ordinances, or laws resulting from project activities

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: (1) Report specifications for each project detailing how reported data are collected and calculated, and (2) approved Quality Assurance Project Plans (QAPP) for projects involving the collection of primary or secondary environmental data.

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: The Office of Environmental Justice performs an annual review of each project to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: The first round of collaborative problem-solving projects was not structured to capture baseline information and some detailed performance measure data. However, the files for these projects contain information and data that can be used in concert with OEJ guidance to make determinations as to whether the results of each of these projects meet the program performance measure by achieving "significant measureable improvement" in their respective communities.

Error Estimate: NA

New/Improved Data or Systems: The CPS Program revised the solicitation to improve data collection. Awards made in FY 2007 are structured to capture baseline information and more detailed performance measure data. This change will be reflected over the next several years.

References: For more information on collaborative problem-solving see *EPA's Environmental Justice Collaborative Problem-Solving Model.* (http://www.epa.gov/compliance/resources/publications/ej/grants/cps-manual-12-27-06.pdf)

FY 2009 Performance Measures:

- **Additional people served per million dollars (US and Mexico federal expenditures) [PART efficiency measure]**
- **Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003 [PART annual measure]**
- **Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003 [PART annual measure]**

Performance Database: No formal EPA database. Performance is tracked and reported quarterly by the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank). Data fields are population served by and homes connected to potable water and wastewater collection and treatment systems.

Data Source: Data sources include U.S. population figures from the 2000 U.S. Census to establish the baseline, data on U.S. and Mexican populations served and homes connected by "certified" water/wastewater treatment improvements from the BECC and data on projects funded from the NADBank.

Methods, Assumptions and Suitability: Summation of population from BECC and NADBank.

QA/QC Procedures: EPA Headquarters is responsible for evaluation of reports from BECC and NADBank on drinking water and wastewater sanitation projects. 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 Quality Reviews: 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.

Error Estimate: The error estimate is the same rate accepted by the U.S. Census.

New/Improved Data or Systems: None.

References:
U.S. Department of Commerce, Bureau of the Census, (Washington, DC: U.S. Department of Commerce, 1990). *Instituto Nacional de Estadistica, Geografia y Informatica, Aguascalientes*, Total Population by State (1990).

Border Environment Cooperation Commission (BECC), Cd Juarez, Chih, and North American Development Bank (NADBank), (San Antonio, TX, 2002).

GOAL 4 OBJECTIVE 3

FY 2009 Performance Measures:

- **Acres of habitat protected or restored in National Estuary Program (NEP) study areas [PART annual measure]**
- **Program dollars per acre of habitat protected or restored [PART annual efficiency measure]**

Performance Database: The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The key field used to calculate annual performance is habitat acreage. Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Information regarding habitat protection is accessible on a web page that highlights habitat loss/alteration, as well as the number of acres protected and restored by habitat type http://www.epa.gov/owow/estuaries/pivot/overview/intro.htm. This allows 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.

Data Source: NEP documents such as annual work plans, which report on NEP achievements during the previous year, annual progress reports, and other implementation tracking materials are used to document the number of acres of habitat restored and protected. EPA aggregates the data provided by each NEP to arrive at a national total for the entire Program. EPA is confident that the data presented are as accurate as possible. Each NEP reviews the information prior to reporting to EPA. In addition, EPA conducts regular reviews of NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: There is not necessarily a direct correlation between the number of habitat acres restored and protected and ecosystem health, nor are habitat quantity or quality the only indicators of ecosystem health. But, habitat acreage is an important measure of on-the-ground progress made toward meeting the EPA annual goal of protecting and restoring habitat in NEP study areas. EPA has defined and provided examples of Aprotection@ and Arestoration@ activities for purposes of tracking and reporting measures (see citation for the PIVOT website in references below.) "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include creation of habitat, , acquisition of areas for the purpose of protection, conservation easements and deed restrictions, efforts resulting in increased submerged aquatic vegetation coverage, permanent shellfish bed openings, and efforts resulting in increased anadromous fish habitat.

The NEP "Habitat Acres Protected or Restored" efficiency measure is calculated by dividing the total ocean and coastal protection program dollars by the total NEP acres protected or restored. The measure is based on habitat data collected by the NEPs as described above and reported in the annual habitat measure, and the total amount of program dollars. That amount is: (1) the sum of the NEP/Coastal budget (including the additional funds for Long Island Sound), (2) the Marine Pollution budget, and (3) the program match as reported by the NEPs.

QA/QC Procedures: Primary data are 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). The NEP staff are requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA then confirms that the national total accurately reflects the information submitted by each program. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews conducted yet.

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, the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting); rather, the acreage is one measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where projects are located in each NEP study area. Not only does this assist both the individual NEP and EPA in obtaining a sense of geographic project coverage, but it provides a basis from which to begin exploring cases where acreage may be double-counted by different agencies. An on-line reporting system—NEPORT--has been developed for the NEPs= use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: Aggregate national and regional data for this measurement, as well as data submitted by the individual National Estuary Programs, is displayed numerically, graphically, and by habitat type in the Performance Indicators Visualization and Outreach Tool (PIVOT). PIVOT data are publicly available at http://www.epa.gov/owow/estuaries/pivot/overview/intro.htm. The Office of Water Quality Management Plan (July 2002) is available on the Intranet at http://intranet.epa.gov/ow/informationresources/quality/qualitymanage.html

FY 2009 Performance Measure:

- **Restore or protect acres of coastal habitat including tidal wetlands, dunes, riparian buffers, and freshwater wetlands. [Long Island Sound]**

Performance Database: The Office of Wetlands Oceans and Watersheds (OWOW) has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The key field used to calculate annual performance is habitat acreage. Annual results have been reported since 2000 for the National Estuary Program (NEP) (results are calculated on a fiscal year basis). The EPA Long Island Sound Office (LISO) requires the states of New York and Connecticut, which are Long Island Sound Study Management Conference partners, to collect and report acres of habitat restored and protected as required by the NEP. The states use internal project tracking systems to gather, summarize and report restoration and protection data to LISO, which, in turn, enters the data into the OWOW habitat information system.

4-Year Performance Data
Annual Performance Goals and Measures

Data Source: NEP documents such as annual work plans (which contain achievements made in the previous year), annual progress reports and other implementation tracking materials, are used to document the number of acres of habitat restored and protected. EPA is confident that the data presented are as accurate as possible. The EPA Long Island Sound Office (LISO) reviews the information prior to reporting. In addition, EPA LISO conducts regular reviews of state habitat restoration work to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported —or of the estuary overall, but it is a suitable measure of on-the-ground progress. Habitat acreage does not necessarily correspond one-to-one with habitat quality, nor does habitat (quantity or quality) represent the only indicator of ecosystem health. Nevertheless, habitat acreage serves as an important surrogate and a measure of on-the-ground progress made toward EPA's annual performance goal of habitat protection and restoration for LIS. EPA has defined and provided examples of protection and restoration activities for purposes of measure tracking and reporting (see citation for the PIVOT website in references below). "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include created areas, protected areas resulting from acquisition, conservation easement or deed restriction, submerged aquatic vegetation coverage increases, permanent shellfish bed openings, and anadromous fish habitat increases.

QA/QC Procedures: Primary data are prepared by the state and federal staff of the LISS Habitat Restoration Team 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). The LISS staff are requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews conducted yet.

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 restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting), but is rather a measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: The LISS is developing a new data system to report and track habitat restoration data from the LISS. This will include latitude and longitude data (where possible) for each project. These data would be mapped to highlight where these projects are located in the LISS study area. This system is expected to be developed over the next several federal fiscal years. An on-line reporting system—NEPORT-- has been developed for the NEPs use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: See V&V for National Estuary Program for PIVOT and NEPORT.

Results of Long Island Sound habitat restoration efforts are documented in the biennial reports, *Sound Health*, and *Protection and Progress*, and the annual LISS Comprehensive Conservation and Management Plan Implementation Tracking Report, available at: http://www.longislandsoundstudy.net/publications.htm#reports.

FY 2009 Performance Measure:

- **Reduce point source nitrogen discharges to the Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL).**

Performance Database: The Permit Compliance System, (PCS) tracks permit compliance and enforcement data for sources permitted under the Clean Water Act National Pollutant Discharge Elimination System (NPDES). Data in PCS include: major permittee self-reported data contained in Discharge Monitoring Reports (DMR); data on permittee compliance status; data on state and EPA inspection and enforcement response. The states of Connecticut and New York are required, as part of their delegated NPDES permit programs, to periodically monitor and test effluent for appropriate pollutants, including nitrogen, complete DMRs and enter this information into PCS.

Data Source: Permittee self-reported DMR data are entered into PCS by state offices, which are delegated to implement the NPDES program. PCS automatically compares the entered DMR data with the pollutant limit parameters specified in the facility NPDES permit. This automated process identifies those facilities which have emitted effluent in excess of permitted levels. Facilities are designated as being in Significant Noncompliance (SNC) when reported effluent exceedances are 20% or more above permitted levels for toxic pollutants and/or 40% or more above permitted levels of conventional pollutants. PCS contains additional data obtained through reports and on-site inspections, which are used to determine SNC, including: non-effluent limit violations such as unauthorized bypasses; unpermitted discharges; and pass through of pollutants which cause water quality or health problems; permit schedule violations; non-submission of DMRs; submission of DMRs 30 or more days late; and violation of state or federal enforcement orders.

Methods, Assumptions and Suitability: There are established computer algorithms to compare DMR effluent data against permitted effluent levels. The algorithms also calculate the degree of permitted effluent exceedance to determine whether toxic/conventional pollutant SNC thresholds have been reached. Nitrogen waste load allocations (WLA) are specified in the December 2000 *A Total Maximum Daily Load (TMDL) Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* that was prepared by the states of New York and Connecticut and approved by EPA in conformance with Section 303(d) of the Clean Water Act. The TMDL nitrogen WLAs are included in the NPDES (state-delegated) permits issued by the states for dischargers to Long Island Sound.

QA/QC Procedures: State offices have documentation of the design, construction and maintenance of the databases used for the performance measures, showing they conform to EPA's PCS standards for point source data. Quality Assurance/Quality Control procedures are in place for PCS data entry. State and Regional PCS data entry staff are required to take PCS training courses. Quality Management Plans (QMPs) are prepared for each Office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance (OC) has established extensive processes for ensuring timely input, review and certification of PCS information. OC's QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008.

Data Quality Review: Information contained in PCS is required by policy to be reviewed by regional and headquarters staff for completeness and accuracy. SNC data in PCS are reviewed quarterly.

Data Limitations: Legal requirements for permittees to self-report data on compliance with effluent parameters in permits generally results in consistent data quality and accuracy. EPA monitors and measures the timeliness of DMR submissions and data entry quality. National trends over the past several years show an average of 94% of DMRs is entered timely and complete. Where data entry problems are observed, OECA works directly with regions and states to improve performance, and in limited circumstances has dedicated supplemental grant resources to help regions and states correct problems. As part of ICIS-NPDES implementation OECA is working to deploy an electronic DMR process to save resources on data entry workload and reduce data input errors.

Error Estimate: There may be errors of omission, misclassification, incorrect georeferencing, misdocumentation or mistakes in the processing of data.

New & Improved Data or Systems: PCS was developed during the 1980's and has undergone periodic revision and upgrade since then. OECA is currently developing a modernized data system to replace PCS, utilizing modern data entry, storage, and analytical approaches. The replacement of PCS with ICIS-NPDES (Integrated Compliance Information System – NPDES),

a modernized and user-friendly NPDES data system, began in June 2006 when eleven states began using the system; seven other states will be migrated to the new system in August, 2007. During phased implementation of ICIS-NPDES across the states a combination of PCS and ICIS-NPDES will be used to generate SNC data. Once fully implemented, ICIS-NPDES will be the sole source of NPDES SNC data.

References:
Nitrogen TMDL: http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325604&depNav_GID=1654
http://www.longislandsoundstudy.net/publications.htm#reports

FY 2009 Performance Measure:

- **Reopen miles of river and stream corridor to anadromous fish passage through removal of dams and barriers or installations of by-pass structures such as fishways. [Long Island Sound]**

Performance Database: A publicly accessible web-based database is under development by the Long Island Sound Study (LISS) to track this measure. Currently, the Connecticut Department of Environmental Protection and the New York State Department of Environmental Conservation track and report fish passage projects and the additional miles of river and stream corridors reopened as a result. The states submit these data to the EPA Long Island Sound Office, which is one of the goals of the LISS.

Data Source: The Long Island Sound Study has established a Habitat Restoration Team (HRT) comprised of federal, state, and local agency staff and private organizations. Public/Private projects to reopen river and stream corridors to fish passage are tracked by the work group coordinators (staff in the states of Connecticut and New York). In addition, the EPA Long Island Sound Office conducts regular reviews of state habitat restoration work to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved. Long Island Sound Study Habitat Restoration annual reports on projects are made available at http://www.longislandsoundstudy.net/habitat/index.htm.

Methods, Assumptions, and Suitability: The Long Island Sound Study goal is to reopen an additional 50 miles of riverine migratory corridor from 2006-2011, or 8.33 miles/year. From 1998 to 2005, the cumulative amount of miles reopened was 81 miles. In future years, additional river miles reopened beyond that baseline will be counted toward the goal.

For each project, the location (state, town), stream name, cause of degradation, project description, miles restored, targeted fish species, implementation partners, and project funding are tracked. Miles restored are calculated based on the length of stream that is reopened to fish by eliminating the obstacle.

QA/QC Procedures: Stream miles are considered reopened after fish are observed passing through the obstacle.

Data Quality Review: Each project report is reviewed by the habitat restoration coordinators, Habitat Restoration Team, and the EPA Long Island Sound Office.

Data Limitations: The stream corridor is considered reopened when anadromous fish are observed passing through the obstacle. The data do not assess the success rate of fish passage or the use of the upstream habitat.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The LISS is developing a new web-based data system to report and track habitat restoration data from the LISS. This will include latitude and longitude data (where possible) for each project. These data would be mapped to highlight where these projects are located in the LISS study area. This system is expected to be developed over the next several federal fiscal years.

References: Long Island Sound Study, Sound Health 2006 Environmental Indicators: www.longislandsoundstudy.net/indicators/index.htm on Habitat Protection/River Miles Restored and Coastal Habitat Restored. Stamford, CT: EPA Long Island Sound Office.

FY 2009 Performance Measure:

- **Working with partners, achieve a net increase of 100,000 acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland condition.**

Performance Database: The U.S. Fish and Wildlife Service produces information on the type and extent of the Nation's wetlands and deepwater habitats. The Emergency Wetland Resources Act of 1986 requires the Service to conduct status and trend studies of the Nation's wetlands, and report the results to Congress each decade. To date the Fish and Wildlife Service has produced four such documents. On Earth Day 2004, President Bush announced a wetlands initiative that established a federal policy beyond "no net loss" of wetlands. As part of that same Earth Day message, the President directed the Fish and Wildlife Service to accelerate the completion of the status and trends and to undertake this study at more frequent intervals. This information is used by Federal, State, and local agencies, academic institutions, U.S. Congress, and the private sector.

The status and trends report is designed to provide recent and comprehensive estimates of the abundance of wetlands in the 48 conterminous States. This status and trends report indicates whether there is an actual increase in wetland acreage or if wetlands are continuing to decrease.

4-Year Performance Data
Annual Performance Goals and Measures

Up-to-date status and trends information is needed to periodically evaluate the efficacy of existing Federal programs and policies, identify national or regional wetland issues, and increase public awareness of and appreciation for wetlands.

The last status and trends report[14] provided the most recent and comprehensive estimates of the current gains and losses for different types of wetlands in the United States on public and private lands from calendar year 1998 to 2004. In calendar year 1997, there were an estimated 105.5 million acres of wetlands in the conterminous United States. In calendar year 2004 107.7 million acres of wetlands were estimated. Of this total, approximately 102.4 million acres (95 percent) are freshwater wetlands and 5.3 million acres (5 percent) are saltwater wetlands. Although the report shows that overall gains in wetland acres exceeded overall losses from 1998 through 2004 (approximately 32,000 acres/yr), this gain is primarily attributable to an increase in unvegetated freshwater ponds, some of which (such as aquaculture ponds) may not function as wetlands and others of which may have varying functional value. The Report also notes the following trends in other wetland categories: freshwater vegetated wetlands declined by 0.5%, a smaller rate of loss than in preceding years; and estuarine vegetated wetlands declined by 0.7%, an increased rate of loss from the preceding years. The Status and Trends Report does not assess the quality or condition of wetlands. EPA will continue working with FWS and other federal agencies to refine the methodology used in preparing future reports, to subdivide current wetland categories, to provide further clarity and information on the types of wetlands that are found on the landscape and to describe the functions and values they provide. In addition EPA is preparing to undertake a National wetland condition study that is scheduled for completion in 2013.

Data Source: The National Status and Trends Report is developed and published by the U.S. Fish and Wildlife Service. This is the only Federal study that provides statistically valid estimates with a published standard error for all wetlands in the conterminous United States. Aerial imagery is the primary data source, and it is used with reliable collateral data such as topographic maps, coastal navigation charts, published soil surveys, published wetland maps, and State, local or regional studies. A random number of sites are also field verified. All photography is cataloged, numbered, tagged, and traced in a database management system.

For each plot, aerial imagery is interpreted and annotated in accordance with procedures published by the Fish and Wildlife Service. The results are compared with previous era imagery, and any changes recorded. The differences between the data sets are analyzed and a statistical estimate of the change is produced.

The five major kinds of wetlands are: 1) freshwater (or palustrine), 2) saltwater (or estuarine), 3) riverine, 4) lacustrine (or lakes and other deepwater habitats), and 5) marine wetlands. For analysis and reporting purposes, these types of wetlands were further divided into subcategories

[14] Dahl, T.E. 2006. Status and trends of wetlands in the conterminous United States 1998 to 2004. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 112pp.

such as freshwater forested wetland, freshwater emergent wetland, estuarine and marine intertidal wetlands.

Methods, Assumptions and Suitability: An interagency group of statisticians developed the design for the national status and trends study published in 2000. The study was based on a scientific probability sample of the surface area of the 48 coterminous States. The area sampled was about 1.93 billion acres and the sampling did not discriminate based on land ownership. The study used a stratified, simple random sampling design. About 754,000 possible sample plots comprised the total population. Geographic information system software was used to organize the information of about 4,682 random sample plots. The plots were examined with the use of remote sensed data in combination with field work. Estimates of change in wetlands were made over a specific time period.

QA/QC Procedures: The Service has developed and implemented quality assurance measures that provide appropriate methods to take field measurements, ensure sample integrity and provide oversight of analyses, which includes reporting of procedural and statistical confidence levels. The objective was to produce comprehensive, statistically valid acreage estimate of the Nation's wetlands. Because of the sample-based approach, various quality control and quality assurance measures were built into the data collection, review, analysis, and reporting stages. This includes field verification of the plots. Six Federal agencies assist with field verification work.

Data Quality Reviews: Not Applicable

Data Limitations: Certain habitats were excluded because of the limitations of aerial imagery as the primary data source to detect wetlands. This was consistent with previous wetland status and trends studies conducted by FWS.

Error Estimate: Estimated procedural error ranged from 4 to 6 percent of the true values when all quality assurance measures have been completed. Procedural error was related to the ability to accurately recognize and classify wetlands both from multiple sources of imagery and on the ground evaluations. Types of procedural errors were missed wetlands, inclusion of upland as wetland, misclassification of wetlands, or misinterpretation of data collection protocols. The amount of procedural error is usually a function of the quality of the data collection conventions; the number, variability, training and experience of data collection personnel; and the rigor of any quality control or quality assurance measures.

New/Improved Data or Systems: Advances in computerized cartography were used to improve data quality and geospatial integrity. Newer technology allowed the generation of existing digital plot files at any scale to overlay directly over an image base.

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4-Year Performance Data
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References:
http://wetlands.fws.gov/index.html
http://wetlands.fws.gov/bha/SandT/SandTReport.html
http://wetlands.fws.gov/Pubs_Reports/publi.htm

FY 2009 Performance Measure:

- **In partnership with the Corps of Engineers, states and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory program**

Performance Database: Since 1989, the goal of the Clean Water Act Section 404 program has been no net loss of wetlands.

Historically, the Corps has collected limited data on wetlands losses and gains in its Regulatory Analysis and Management System (RAMS) permit tracking database. The Corps has compiled national Section 404 wetland permitting data for the last 10 years reflecting acres of wetland impacts avoided (through the permit process), acres permitted for impacts, and acres mitigated. However, limitations in methods used for data collection, reporting and analysis resulted in difficulties in drawing reliable conclusions regarding the effects of the Section 404 program.

Data Source: Data included in RAMS is generally collected by private consultants hired by permit applicants or Corps Regulatory Staff. Data input is generally done by Corps staff.

Methods, Assumptions and Suitability: RAMS was designed to be an administrative aid in tracking permits, thus it lacks many of the fields necessary to adequately track important information regarding wetland losses and gains. Also, the database was modified differently for each of the 38 Corps Districts making national summaries difficult. Furthermore, the database is also proprietary making it difficult to retrofit without utilizing its original developers.

QA/QC Procedures: Historically, there has not been a high level of QA/QC with regard to data input into RAMS. Its antiquated format and numerous administrative fields discourage use. Lack of standard terms and classification also make all aspects of data entry problematic.

Data Quality Reviews: Independent evaluations published in 2001 by the National Academy of Sciences (NAS) and the General Accounting Office (GAO) provided a critical evaluation of the effectiveness of wetlands compensatory mitigation (the restoration, creation, or enhancement of wetlands to compensate for permitted wetland losses) for authorized losses of wetlands and other waters under Section 404 of the Clean Water Act. The NAS determined that available data was insufficient to determine whether or not the Section 404 program was meeting its goal of no net loss of either wetland area or function. The NAS added that available data suggested that the program was not meeting its no net loss goal. Among its suite of recommendations, the NAS

noted that wetland area and function lost and regained over time should be tracked in a national database and that the Corps should expand and improve quality assurance measures for data entry.

Data Limitations: As previously noted, RAMS currently provides the only national data on wetlands losses and gains in the Section 404 Program. Also, as previously noted, there are a number of concerns regarding the conclusions that can be drawn from these numbers. Data quality issues include:
1. Inability to separate restoration, creation, enhancement and preservation acreage from the aggregate "mitigation" acreage reported;
2. Lack of data regarding how much designated mitigation acreage was actually undertaken, and how much of that total was successful;
3. Lack of data regarding how much of the permitted impacts actually occurred; and
4. Limitations on identifying acres "avoided," because the figure is only based on the difference between original proposed impacts and impacts authorized. Often, permit applicants who are aware of the 404 program's requirements to avoid and minimize impacts to wetlands, make initial site selection and site design decisions that minimize wetland impacts prior to submitting a permit application. Such avoidance decisions benefit applicants, as their applications are more likely to be accepted and processed with minor changes. This behavioral influence that the program engenders is difficult to capture and quantify, but contributes considerable undocumented "avoided" impacts.

Error Estimate: Not applicable

New/Improved Data or Systems: The EPA and the Corps have acknowledged the need for improved 404 tracking. Between 2000-2002, the Corps developed a new national permit tracking database called ORM (Operation and maintenance business information link, Regulatory Module) to replace its existing database (RAMS). ORM1, as it was called, was deployed in most of the Corps' 38 districts by Fall 2006, but in 2004 the Corps began partnering with EPA on a set of comprehensive upgrades to ORM1 to spatially enable the data management system and improve data sharing capabilities. By July 2007, the upgraded version of ORM known as ORM2 had been deployed in 37 of the Corps' 39 districts. This should enable national reporting in 2008. Unlike ORM1, ORM2 will have expanded GIS capabilities and additional mandatory data fields for impact and mitigation data. EPA, other federal and state agencies, as well as the public will also have expanded access to data in ORM2 via a system of web-services and web-mapping tools. EPA's interface with ORM2 (tentatively named the Wetlands Information Layer (WIL)) is currently under development and will provide EPA with the ability to access and manage the data available in ORM2 to help meet business needs in the Section 404 program.

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ORM2 is being designed to provide improved tracking regarding:

- Type of impacts (i.e., work type)
- Type, quantity and location of aquatic resources impacted (Using Cowardin classification system)
- Type, quantity and location of aquatic resource mitigation (Using Cowardin classification system)
- Type and quantity of mitigation by method (i.e., restoration, creation, enhancement, or preservation)
- Differentiating stream mitigation (in linear feet) from wetlands mitigation (in acres)
- Spacial tracking via GIS enhancements for both impact and mitigation sites *(planned)*
- Functional losses (debits) at the impact site and functional gains at the mitigation site (credits) if assessment tool is available and applied
- Mitigation banks via the inclusion of a comprehensive module for tracking and managing mitigation banks known as the Regional Internet-based Bank Information Tracking System (RIBITS). With EPA's assistance RIBITS has been piloted in 4 Corps districts to date.

References: Regulatory Analysis and Management System (RAMS) website: http://www.cecer.army.mil/td/tips/product/details.cfm?ID=265&TOP=1

Regional Internet-based Bank Information Tracking System (RIBITS) website: http://www.erdc.usace.army.mil/pls/erdcpub/WWW_WELCOME.NAVIGATION_PAGE?tmp_next_page=114145

National Academy of Sciences (2001). *Compensating for Wetland Losses Under the Clean Water Act.* Washington DC. Available at: http://www.epa.gov/wetlandsmitigation/

FY 2009 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples [PART performance measure]**

Performance Database: Great Lakes National Program Office (GLNPO) Great Lakes Fish Monitoring Program (GLFMP) [1](see reference #1 below). This program is broken into two separate elements, Element 1 – Open Water Trend Monitoring and Element 2 – Game Fish Fillet Monitoring. Each program collects and monitors contaminants in Great Lakes fish at alternating locations throughout the Great Lakes Basin; fish are collected at one set of sites during even years and at another set in odd years. Element 1 began with the collection of data in Lake Michigan in 1972 and the additional lakes were added in 1976. Element 2 began with the collection of data in all five of the Great Lakes in the early 1980's. In FY09, the database will contain quality reviewed field data from fish collected in 2007 and all quality reviewed analytical

data for fish collected between 1972 and 2006. A new grantee was selected for this program in 2005, thus delaying the release of analytical data collected in 2004 and 2005 until 2007. Data collected in 2007 is expected to be able to be used for reporting in 2009. Data are reported on a calendar year basis and are specific to the even or odd year sampling schedule (even year sites are only compared to other even year sites etc.)

Data Source: GLNPO is the principal source of data for the Great Lakes Fish monitoring program. The Great Lakes States and Tribes assist with fish collection. Previous cooperating organizations include the U.S. Geological Survey (USGS), the U.S. Fish and Wildlife Service (USFWS), and the Food and Drug Administration (FDA).

Methods, Assumptions, and Suitability: This indicator provides concentrations of selected organic contaminants in Great Lakes open water fish. The Great Lakes Fish Monitoring Program is broken into two separate elements that monitor potential exposure to contaminant concentrations for wildlife (Element 1) and humans through consumption (Element 2). Only Element 1 is included in this indicator.

The first element, Open Lakes Trend Monitoring Program, was created to: (1) determine time trends in contaminant concentrations, (2) assess impacts of contaminants on the fishery using fish as biomonitors, and (3) assess potential risk to the wildlife that consume contaminated fish. The first element includes data from ten 600-700 mm lake trout (*Salvelinus namaycush*) whole fish composites (5 fish in each composite) from each of the lakes. Since sufficient lake trout are not found in Lake Erie, data for 400 – 500 mm walleye (*Stizostedion vitreum vitreum*) are used for that Lake.

All GLFMP data are independently reviewed for quality consideration prior to loading into the Great Lakes Environmental Database (GLENDA). Included in GLENDA are flags for each data point that can be used to evaluate the quality of the data. Each Great Lake is a unique environment with a distinct growth rate, food web, and chemical integrity. For this reason, a direct comparison of annual concentrations between basins is not appropriate. However, an average annual basin-wide percent decrease can be determined using an exponential decrease function, and the 1990 data as the baseline. The percent decrease of Element 1 can be calculated and compared to the 5% reduction target to determine if the target has been met. All years of data from all lakes are plotted on the same graph, with each year containing 5 data points. An exponential decrease is then found for the entire data set and the percent decrease is calculated from the best fit line. GLNPO rounds the calculated value to the nearest whole percentage for reporting and comparison purposes. The Lake Michigan data set represents the worst case scenario in the Great Lakes Basin for the Open Lakes Trend Monitoring Program.

QA/QC Procedures: GLNPO has an approved Quality Management System in place[2] (see reference #2 below) that conforms to the USEPA Quality Management Order and is audited every 3 years in accordance with Federal policy for Quality Management. The Quality

Assurance (QA) plan that supports the analytical portion of the fish contaminant program is approved and available online[3] (see reference #3 below). The revised draft field sampling Quality Assurance Project Plan (QAPP) and draft Quality Management Plan has been submitted to the GLNPO QA Officer for review and approval. Approval of the revised sampling objectives is subject to results of a peer review conducted in fall 2007.

Data Quality Review: GLNPO's Quality Management System has been evaluated as "outstanding" in previous peer and management reviews[4] (see reference #4 below). Specific highlights relative to this indicator include: *"QA requirements are systematically planned using the DQO process. Major programs such as the Open Lakes Monitoring (Lake Guardian sampling activities), Open Lakes Organics Monitoring, the Biology Monitoring, the Great Lakes Fish Monitoring and the Legacy Act program were exemplary in systematic planning and documenting QA requirements." (4)* GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: Great Lakes Fish Monitoring Program data are not well-suited to portray localized changes. Nevertheless, data collected at a certain site (odd year or even year sites) can be compared to data collected from the same site. In addition, only very general comparisons can be made of contaminant concentrations between lakes. A recent review of the odd year Open Lake Trend Monitoring in Lake Erie data indicate an increased variability in the data between the years of 1999 and 2003 because during those years several individual samples (fish) fell outside of the desired size range leading to a higher or lower than average mean sample size for the composite.

Error Estimate: The data quality objective of the fish contaminant program was to detect a 20% change in each measured contaminant concentration between two consecutively sampled periods at each site. Based on changing environmental conditions, the data quality objective has been tentatively revised to have an 80% probability to detect a 10% change per year, over three to four sampling periods, at the 95% confidence level. An official outside peer review of this new data quality objective and associated data is tentatively scheduled for the 4th quarter 2007. This peer review will also assist in providing a data quality objective for Element 2.

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. GLNPO has awarded a new consortium grant for these analyses that allows researchers from three different universities to specialize in their individual areas of analytical expertise and provide more timely data of a higher quality.

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References:

Supporting Program Documentation: All journal publications relevant to the Great Lakes Fish Monitoring Program, final project reports, and quality documentation can be found at the GLFMP website, http://www.epa.gov/glnpo/glindicators/fish.html.

"*The Great Lakes Fish Monitoring Program - A Technical and Scientific Model For Interstate Environmental Monitoring.*" September, 1990. EPA503/4-90-004.

"Quality Management Plan for the Great Lakes National Program Office." EPA905-R-02-009. October 2002, Approved April 2003. http://www.epa.gov/glnpo/qmp/

"Great Lakes Fish Monitoring Program – Quality Assurance Project Plan for Sample Collection Activities", Great Lakes National Program Office. Available at http://www.epa.gov/glnpo/glindicators/fishtoxics/GLFMP_QAPP_082504.pdf

"GLNPO Management Systems Review of 2006." Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes basin [PART performance measure]**

Performance Database: Great Lakes National Program Office (GLNPO) integrated atmospheric deposition network [1] (see reference #1 below) (IADN) operated jointly with Environment Canada. Reporting starts with 1992 data and includes concentrations of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and organochlorine pesticides in air and precipitation; however, this Performance Measure addresses only PCBs. Monitoring results from 2007 will be reported in 2009. Data are reported on a calendar year basis the second year after collection.

Data Source: GLNPO and Environment Canada are the principal sources of the data for IADN. Data also come through in-kind support and information sharing with other Federal agencies and Canada. Only data from US stations in IADN are being used for this measure.

Methods, Assumptions, and Suitability: There are five master IADN stations, one for each lake, which are supplemented by satellite stations in other locations. The master stations are located in remote areas and are meant to represent regional background levels. Concentrations from the master stations are used for the performance measure. Concentrations from the satellite stations in Chicago and Cleveland are also sometimes used to demonstrate the importance of urban areas to atmospheric deposition to the Lakes. Air samples are collected for 24 hours using

high-volume samplers containing an adsorbent. Precipitation samples are collected as 28-day composites. Laboratory analysis protocols generally call for solvent extraction of the organic sampling media with addition of surrogate recovery standards. Extracts are then concentrated followed by column chromatographic cleanup, fractionation, nitrogen blow-down to small volume (about 1 mL) and injection (typically 1 uL) into gas chromatography instruments.

All IADN data are loaded and quality controlled using the Research Database Management System (RDMQ), a Statistical Analysis System (SAS) program. RDMQ provides a unified set of quality assured data, including flags for each data point that can be used to evaluate the usability of the data. Statistical summaries of annual concentrations are generated by the program and used as input into an atmospheric loading calculation. The loadings calculation is described in detail in the Technical Summary referenced below. However, calculating loadings requires additional data and constants that introduce further error. Therefore, the averaged annual concentrations rather than the loadings are used in the performance measure. Concentrations can vary from year to year due to differences in weather (temperature, wind patterns, etc.), so comparing concentrations from one year to the next is not always appropriate. This performance measure examines the average percent decline for the **long-term trend** determined using an exponential decrease function. Each year the average percent decline is calculated after adding new data. GLNPO rounds the calculated value to the nearest whole percentage for reporting and comparison purposes. A baseline percent decrease was determined using data through 2000, and the aim is that this rate of decrease will continue.

QA/QC Procedures: GLNPO has a Quality Management System in place, which conforms to the USEPA Quality Management Order and is audited every 5 years in accordance with Federal policy for Quality Management[2] (see reference #2 below). Quality Assurance Project Plans are in place for the laboratory grantee, as well as for the network as a whole. A jointly-funded QA officer conducts laboratory and field audits, tracks QA statistics, and carries out special QA studies. Data from all contributing agencies are quality-controlled using the SAS-based system.

Data Quality Review: GLNPO's Quality Management System has been evaluated as "outstanding" in previous peer and management reviews[3] (see reference #3 below). GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards[4] (see reference #4 below). The IADN program has a joint Canadian-US quality system and binational Steering Committee that meets periodically in person or via conference calls to make decisions on network operation and data management and quality.

A regular set of laboratory and field blanks is taken and recorded for comparison to the IADN field samples. In addition, a suite of chemical surrogates and internal standards is used extensively in the analyses. There are common performance standards for PCBs, organochlorine pesticides, and PAHs. A common calibration standard for PCBs is now used. A jointly-funded QA officer conducts laboratory and field audits, tracks QA statistics, and carries out special QA

studies. As previously mentioned, data from all contributing agencies are quality-controlled using a SAS-based system.

Data Limitations: The sampling design is dominated by rural sites that under-emphasize urban contributions to deposition; thus, although the data are very useful for trends information, there is less assurance of the representativeness of deposition to the whole lake. U.S. and Canadian laboratories use somewhat different sampling and analytical methods; QA studies have found that differences in resulting data are attributable mostly to the sampling differences. There are gaps in open lake water column organics data, thus limiting our ability to calculate atmospheric loadings. This gap was partially addressed through the recent implementation by GLNPO of the Great Lakes Aquatic Contaminant Surveillance (GLACS) program, which had water contaminant data collected in Lakes Michigan and Superior.

In the past, there has been a lag in the data from the Canadian sites (Burnt Island on Lake Huron and Point Petre on Lake Ontario). U.S. data is usually reported two years after it is collected (i.e., 2004 data was reported in 2006); the Canadian data may not be available on this schedule; consequently only US data is being used to report on this measure.

Error estimate: The performance measure examines the long-term trend in concentrations. Concentrations have an error of +/- 40%, usually less. Differences between laboratories have been found to be 40% or less. This is outstanding given the very low levels of these pollutants in the air and the difficulty in analysis. Improvements in quality assurance (use of a clean lab for Canadian precipitation analysis, making calibration standards consistent among agencies, etc.) are helping to further close this gap, and recent inter-comparison site data reflect this.

New/Improved Data or Systems: Joint data that has passed quality review will be available from Canada's National Atmospheric Chemistry (NAtChem) Database and Analysis System, which includes atmospheric data from many North American networks and is linked from IADN's website at: http://www.msc.ec.gc.ca/iadn/data/form/form_e.html The IADN homepage can be found at www.msc.ec.gc.ca/iadn/ . Copies of IADN data are now held in U.S. and Canadian databases. Environment Canada management is working to reduce the data lag from the Canadian IADN stations.

References:

1. *"Great Lakes National Program Office Indicators. Air Indicators."* Available at http://www.epa.gov/glnpo/glindicators/air.html

Details of these analyses can be found in the Laboratory Protocol Manuals or the agency project plans, which can be found on the IADN resource page at http://www.epa.gov/glnpo/monitoring/air/iadn/iadn.html

Overall results of the project can be found in "*Technical Summary of Progress under the Integrated Atmospheric Deposition Program 1990-1996"* and the *"Technical Summary of Progress under the Integrated Atmospheric Deposition Network 1997-2002"*. Both (as well as the Atmospheric Loadings reports) can be found on the IADN resource page.

2. *"Quality Management Plan for the Great Lakes National Program Office."* EPA905-R-02-009. October 2002, Approved April 2003.

3. *"GLNPO Management Systems Review of 2006".* Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

4. *"Integrated Atmospheric Deposition Network Quality Assurance Program Plan - Revision 1.1.* Environment Canada and USEPA. June 29, 2001. Unpublished - in USEPA Great Lakes National Program Office files.

FY 2009 Performance Measure:

- **Number of Beneficial Use Impairments removed within Areas of Concern. [PART performance measure]**

Performance Database: USEPA's Great Lakes National Program Office will track the cumulative total Beneficial Use Impairments (BUIs) removed within the 26 Areas of Concern (AOC) located entirely within the United States and the five AOCs that are shared by both the United States and Canada.

Data Source: Internal tracking and communications with Great Lakes States, the US Department of State and the International Joint Commission (IJC).

Methods, Assumptions, and Suitability: Restoration of U.S. or Binational Areas of Concern will ultimately be measured by the removal of all beneficial use impairments, leading to de-listing of all of the U.S. or Binational Areas of Concern by 2025. A total of 43 Great Lakes Areas of Concern have been identified: 26 located entirely within the United States; 12 located wholly within Canada; and 5 that are shared by both countries. 301 United States or Binational Areas of Concern remain. Remedial Action Plans for each of these Areas of Concern address one or more of up to 14 beneficial use impairments associated with these areas. At the end of Fiscal Year 2006, there was a total universe of 260 beneficial use impairments reported in the United States or Binational Areas of Concern. An impaired beneficial use means a change in the chemical, physical or biological integrity of the Great Lakes system sufficient to cause any of the following:
-restrictions on fish and wildlife consumption
-tainting of fish and wildlife flavor
-degradation of fish wildlife populations

-fish tumors or other deformities
-bird or animal deformities or reproduction problems
-degradation of benthos
-restrictions on dredging activities
-eutrophication or undesirable algae
-restrictions on drinking water consumption, or taste and odor problems
-beach closings
-degradation of aesthetics
-added costs to agriculture or industry
-degradation of phytoplankton and zooplankton populations
-loss of fish and wildlife habitat

Additional information is available at: http://www.epa.gov/glnpo/aoc/index.html

The States work with the local stakeholders in the Areas of Concern to develop delisting criteria for the impaired BUIs. The BUI delisting criteria are used to assess when a BUI is restored and can be delisted. After all BUIs in an AOC are delisted, the entire Area of Concern can be delisted.

QA/QC Procedures: GLNPO has an approved Quality Management System in place (see reference #1 below) that conforms to the USEPA Quality Management Order and is audited every 5 years in accordance with Federal policy for Quality Management.

Data Quality Review: GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews (see reference #2) below. GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: None known.

Error Estimate: None.

New/Improved Data or Systems: NA

References:
1. GLNPO will develop and maintain the appropriate tracking system for de-listed U.S. or binational Beneficial Use Impairments.

2. *"Quality Management Plan for the Great Lakes National Program Office."* EPA905-R-02-009. October 2002, Approved April 2003.

3. *"GLNPO Management Systems Review of 2006."* Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes [PART performance measure]**

Performance Database: Data tracking sediment remediation are compiled in two different formats. The first is a matrix that shows the annual and cumulative totals of contaminated sediment that was remediated in the Great Lakes basin in the reporting year and from 1997 for each Area of Concern or other non-Areas of Concern with sediment remediation. The second format depicts the yearly totals on a calendar year basis graphically. These databases are reported approximately one year after the completion of work, thus, results from calendar year 2008 remediation will be reported in FY 2009.

Data Source: GLNPO collects sediment remediation data from various State and Federal project managers across the Great Lakes region that conduct and coordinate contaminated sediments work. These data are obtained directly from the project manager via an information fact sheet the project manager completes for any site in the Great Lakes basin that has performed any remedial work on contaminated sediment. The project manager also indicates whether an approved Quality Assurance Project Plan (QAPP) was used in the collection of data at the site. GLNPO does not accept unsolicited data without adequate assurance that quality system documentation was in place and the reporters of the data are not likely to be biased.

Methods, Assumptions, and Suitability: The data collected to track sediment remediation in the Great Lakes show the amount of sediment remediated (dredged, capped, other) for that year, the amount of sediment remediated in prior years, and the amount of sediment remaining to be addressed for a particular site. This format is suitable for year-to-year comparisons for individual sites. GLNPO sums the volume estimates as provided by the individual project managers, but then rounds the cumulative total to the nearest one hundred thousand cubic yards for reporting purposes.

QA/QC Procedures: GLNPO relies on the individual government/agency project managers to provide information on whether an approved QAPP was in place during remediation of contaminated sediment. This information is used to decide if the data provided by the project manager are reliable for GLNPO reporting purposes. If an approved QAPP was not used, sediment data would not likely be reported by GLNPO, unless GLNPO finds that alternative information is available that provides sufficient quality documentation for the project and associated data. This approach allows GLNPO to use best professional judgment and flexibility in reporting data from any cases where there was not a QAPP, but (a) the remedial action is

noteworthy and (b) the project was conducted by recognized entities using widely accepted best practices and operating procedures.

The tracking database houses information on the calculated amount of sediment remediated at individual sites as provided by the project managers. The individual site project managers are responsible for completing the data request forms, reviewing draft figures to verify that the GLNPO project manager transferred the data correctly, and providing any updated or improved estimates. It is GLNPO's responsibility to determine if the data are usable based upon the information sheet provided by the project managers. GLNPO does not attempt to verify mass and volume estimates due to the variability in how to calculate them. GLNPO ensures that the estimates provided make sense for the site, and that all estimates are reported in the same units. GLNPO management and Sediment Team members review the data, in the graphic and matrix formats, prior to reporting. GLNPO's Sediment Team works closely with partners and has confidence in those who provide data for the summary statistics. This familiarity with partners and general knowledge of ongoing projects allows GLNPO management to detect mistakes or questionable data.

Data Quality Review: The data, in both the graphic and matrix formats, are reviewed by individual project managers, GLNPO's Sediment Team, and management prior to being released. Data quality review procedures are outlined in the QAPP referenced below. GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews. (See reference # 5 below). Specific highlights from this review relative to this indicator include: *"Across GLNPO, assessment of the quality of existing data and documentation of the quality of existing data for intended use is a standard practice. This is commendable as the Agency is still attempting to define requirements for usability existing data."* GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards.

Data Limitations: The data provided in the sediment tracking database should be used as a tool to track sediment remediation progress at sites across the Great Lakes Basin. Many of the totals for sediment remediation are estimates provided by project managers. For specific data uses, individual project managers should be contacted to provide additional information.

Error Estimate: The amount of sediment remediated or yet to be addressed should be viewed as estimated data. A specific error estimate is not available.

New/Improved Data or Systems: Existing tracking systems are anticipated to remain in place.

References:

1. Giancarlo Ross, M.B. Quality Assurance Project Plan for "Great Lakes Sediment Remediation Project Summary Support." Unpublished – in Great Lakes National Program Office files.

2. Giancarlo Ross, M.B. "*Sediment Remediation Matrix*". Unpublished - in Great Lakes National Program Office files.

3. Giancarlo Ross, M.B. "*Sediment Remediation Pie Charts*". Unpublished - in Great Lakes National Program Office files.

4. Giancarlo Ross, M.B. "Compilation of Project Managers Informational Sheets". Unpublished - in Great Lakes National Program Office files

5. "*GLNPO Management Systems Review of 2006.*" Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Cost per cubic yard of contaminated sediments remediated (cumulative). [PART Efficiency Measure]**

Performance Database: Data tracking sediment remediation volumes and costs are compiled for all Great Lakes Legacy Act (GLLA) projects. As all GLLA projects are managed by GLNPO, project volumes and costs are all readily available within 2-3 months of project completion. This database is updated with cost and volume numbers at the completion of each GLLA sediment clean-up project.

Data Source: GLNPO collects sediment remediation data for all the GLLA projects. At the completion of each project a hydrographic survey is conducted that provides accurate volumes for dredged/remediated sediments at all GLLA projects. This information is collected using an approved Quality Assurance Project Plan (QAPP). All GLLA projects require a QAPP prior to conducting work at the site. GLNPO does not accept data without adequate assurance that a QAPP was in place and the reporters of the data are not likely to be biased. Following the completion of a project, a final report is developed that includes information on dredged/remediated sediment volumes. Also, at the close of each project a final accounting is conducted to provide accurate final cost estimates.

Methods, Assumptions, and Suitability: This measure allows comparison of the actual cost of remediating Great Lakes contaminated sediments (pursuant to the Great Lakes Legacy Act) to a threshold cost of $200 per cubic yard. The target is achieved when the actual cost of contaminated sediment remediation (cumulative) pursuant to the Legacy Act is less than or equal to $200 per cubic yard. The program does not anticipate that actual costs per cubic yard would decrease each year, particularly since project costs are expected to increase as they become more complicated and disposal costs increase in future years.

The estimated sediment remediation cost target of $200 per cubic yard has been determined using best professional judgment. Reference points include a 2004 effort by the U.S. Great Lakes Policy Committee and a January 2007 paper on Environmental Dredging Costs analyzing 64 completed environmental dredging projects.

Targets and results will be reported on a calendar year basis. The program will use total funding as the basis of this measure, but will also track federal and non-federal dollars. Final project costs and the quantity of cubic yards of contaminated sediments will be calculated using cumulative numbers.

Data are collected to track the amount of sediment remediated and project cost. Projects are not included in the database until they are completed; partial project information is not reported for this measure.

QA/QC Procedures: GLNPO has a QA Manager who is responsible for approval of the QAPP for all GLLA projects. A QAPP is required for each GLLA project and a draft Quality Management Plan for the GLLA is used as an overall quality management guide. Part of this site-specific QAPP includes information on the hydrographic surveys used to determine volume estimates for each project. EPA contractors oftentimes accompany the surveying crew to ensure all procedures are followed. This information is typically made available approximately 2-3 months following project completion.

Data Quality Review: The data, in both the graphic and matrix formats, are reviewed by individual project managers, GLNPO's Sediment Team, and management prior to being released. GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews (see Reference #4 below). GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards.

Data Limitations: The data generated from this efficiency measure should be used as an indicator of the general trend in the costs of sediment remediation under the Great Lakes Legacy Act.

Error Estimate: A specific error estimate is not available.

New/Improved Data or Systems: The recent GLNPO Quality Management Review of GLNPO from July of 2006 highlighted the following improvements:

> "*Management of the Great Lakes Legacy program is exemplary. Ensuring conformance with EPA's quality requirements was evident in the creative approach to planning and overseeing quality throughout the life cycle of the project. The draft 2005 Quality Implementation and Management Plan is comprehensive. QA plans reviewed were detailed and appropriately approved. Post project meetings with EPA, state partners and local advisory councils to review project with focus on detailing lessons learned is a best*

practice. Data Quality Assessment to determine opportunities for improvement is a critical component of the QA Project Plan. The project officers are to be commended for the documented life cycle management for the Great Lakes Legacy Act Program. (4)

References:

1. *Estimates of Great Lakes Sediment Remediation Needs*. U.S. Great Lakes Policy Committee. January 11, 2005. Unpublished - in USEPA GLNPO files.

2. Estes, T.J. 2007. *Environmental Dredging Project Costs--The Mystery. The Mystique, The Muddle.* Proceedings of the Fourth International Conference on Remediation of Contaminated Sediments.

3. Tuchman, M and Alexander, M. 2007. *Remediation of the Black Lagoon, Trenton, Michigan, Great Lakes Legacy Program.* Draft Report.

4. *"GLNPO Management Systems Review of 2006."* Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measures:

- **Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.4 million pounds reduced) [PART annual output measure-Chesapeake Bay Program]**
- **Percent of goal achieved for implementation of phosphorus reduction practices (expressed as progress meeting the phosphorus reduction goal of 14.36 million pounds) [PART annual output measure-Chesapeake Bay Program]**
- **Percent of goal achieved for implementation of sediment reduction practices (expressed as progress meeting the sediment reduction goal of 1.69 million tons reduced) [PART annual output measure-Chesapeake Bay Program]**
- **Total nitrogen reduction practices implementation achieved as a result of agricultural best management practice implementation per million dollars to implement agricultural BMPs [PART annual efficiency measure]**

Performance Database: Reducing Pollution Summary (Controlling Nitrogen, Phosphorus and Sediment.) Implementation of point & nonpoint source nitrogen and phosphorus reduction practices throughout the Bay watershed, expressed as % of reduction goal achieved. The nitrogen goal is a 162.4 million pound reduction from 1986 levels to achieve an annual cap load of 175 million lbs (based on long-term average hydrology simulations). The phosphorus goal is a 14.36 million pound reduction from FY1986 levels to achieve an annual cap load of 12.8 million lbs (based on long-term average hydrology simulations). Achieving the cap loads is expected to result in achievement of the long-term restoration goals for submerged aquatic vegetation and dissolved oxygen. Point source loads are monitored or estimated based on expert evaluation of

treatment processes. Nonpoint source loads are simulated based on reported implementation of best management practices (BMPs) that reduce nitrogen and phosphorus pollution. The simulation removes annual hydrological variations in order to measure the effectiveness of BMP implementation and converts the numerous BMPs, with various pollution reduction efficiencies – depending on type and location in the watershed – to a common currency of nitrogen and phosphorus reduction.

Implementation of sediment reduction practices throughout the Bay watershed, expressed as % of land-based sediment reduction goal achieved. The sediment reduction goal is a 1.69 million ton reduction from FY 1986 levels to achieve an annual cap load of 4.15 million tons (based on average hydrology simulations). Achieving this cap load is expected to result in achievement of the long-term restoration goals for submerged aquatic vegetation and dissolved oxygen. Loads are simulated based upon reported implementation of best management practices (BMPs) that reduce sediment pollution. The simulation removes annual hydrological variations in order to measure the effectiveness of BMP implementation and converts the numerous BMPs, with various pollution reduction efficiencies – depending on type and location in the watershed – to a common currency of sediment reduction.

Agricultural BMP costs include all capital and O&M costs assumed by both landowners and government agencies. This measure focuses on agricultural BMPs because they are the most cost effective way to reduce nutrient loading in the watershed.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/186-data-2003.xls. Data have been reported for calendar years 1985, 2000, 2001, 2002, 2003, 2004, 2005, 2006 and are expected on an annual basis after 2006. Data are from Chesapeake Bay watershed portions of NY, MD, PA, VA, WV, DE, and DC.

The FY 2009 Annual Performance Report for these measures will be based on the results of the calendar year 2008 data collection. We expect to receive the preliminary results for calendar year 2008 in September 2009.

Data Source: Each jurisdiction (NY, MD, PA, VA, WV, DE, and DC) tracks and approves annual point source effluent concentrations, flows data as well as non-point source BMP data. It submits the data to the Chesapeake Bay Program Office. Contact Jeff Sweeney, jsweeney@chesapeakebay.net.

Agricultural practice costs used in the PART efficiency measure are in the guidance document "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability" (Technical Support Document) found at http://www.chesapeakebay.net/ecoanalyses.htm under "Part I: Documentation of Estimated Costs of the Tier Scenarios". The direct address is

http://www.chesapeakebay.net/pubs/doc-ecoanal-PartI.pdf. Specific cost information for agricultural practices begins on electronic page 59 and a summary table of unit BMP costs is on electronic page 93.

Methods, Assumptions and Suitability: The data are of high quality. Data are consolidated by watershed boundaries at the state level and provided to the Chesapeake Bay Program Office for input into the watershed model.

What is the Watershed Model?

A lumped parameter Fortran-based model (HSPF) that mimics the effects of hydrology, nutrient inputs, and air deposition on land and outputs runoff, groundwater, nutrients and sediment to receiving waters. Ten years of simulation are used and averaged to develop the reduction effects of a given set of Best Management Practices (BMPs). Using a ten-year average of actual weather (hydrologic, temperature, wind, etc.) ensures wet, dry and average conditions for each season are included. The effectiveness of the model is dependent upon the quality of the assumptions, BMPs and landuse descriptions used. The model is calibrated extensively to real-time monitoring, outside peer review and continual updates as better information, data collection and computer processing power become available.

What are the input data?

The model takes meteorological inputs such as precipitation, temperature, evapotranspiration, wind speed, solar radiation, dewpoint, and cloud cover to drive the hydrologic simulation. The changes in nutrient outputs are primarily determined by such factors as land use acreage, BMPs, fertilizer, manure, atmospheric deposition, point sources, and septic loads.

BMPs: Watershed Model BMPs include all nutrient reduction activities tracked by the jurisdictions for which a source has been identified, cataloged and assigned an efficiency. Efficiencies are based on literature review, recommendations of the appropriate source workgroup and approved by the Nutrient Subcommittee. It is the responsibility of the jurisdictions to track and report all nutrient reduction activities within their borders and maintain documentation to support submissions.

Land use acreage is determined by combining analyses of satellite imagery and county-based databases for agricultural activities and human population. Fertilizer is determined by estimated application rates by crop and modified by the application of nutrient management BMPs. Manure applications are determined by an analysis of animal data from the census of agriculture.

Atmospheric deposition is determined by an analysis of National Atmospheric Deposition Program (NADP) deposition data and modified by scenarios of the Regional Acid Deposition

Model. Point Source loads are determined from Discharge Monitoring Reports. Septic loads are estimated in a study commissioned by the Chesapeake Bay Program (CBP).

http://www.chesapeakebay.net/pubs/1127.pdf
http://www.chesapeakebay.net/pubs/114.pdf
http://www.chesapeakebay.net/pubs/112.pdf
http://www.chesapeakebay.net/pubs/777.pdf

What are the model outputs?

The watershed model puts out daily flows and nitrogen, phosphorus, and sediment loads for input to the water quality model of the Chesapeake Bay. The daily loads are averaged over a 10-year hydrologic period (1985-1994) to report an average annual load to the Bay. The effect of flow is removed from the load calculations.

What are the model assumptions?

BMPs: Model assumptions are based on three conditions: knowledge, data availability and computing power. The ability to alter what is used in the watershed model is a function of the impact the change would have on calibration. In many cases there is new information, data or methodologies that would improve the model, but changes are not possible because of the impact on the current calibration.

Changes in manure handling, feed additives, new BMPs and some assumptions could be incorporated into the model without impacting the calibration. In these cases, the changes were made.

Other input assumptions, such as multiple manure application levels, increasing the number of and redefining some land uses, defining new nutrient or sediment sources, adjusting for varying levels of management (range of implementation levels) are items scheduled for incorporation in the new model update (2008)

Input assumptions are documented in the above publications. Assumptions of the actual model code are in the HSPF documentation:
ftp://water.usgs.gov/pub/software/surface_water/hspf/doc/hspfhelp.zip

Input data are collected from states and local governments programs. Methods are described at http://www.chesapeakebay.net/data/index.htm, (refer to CBP Watershed Model Scenario Output Database, Phase 4.3). For more information contact Kate Hopkins at hopkins.kate@epa.gov or Jeff Sweeney jsweeney@chesapeakebay.net

QA/QC Procedures: State offices have documentation of the design, construction and maintenance of the databases used for the performance measures, showing they conform to existing U.S. Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) technical standards and specifications for nonpoint source data and EPA's Permit Compliance System (PCS) standards for point source data. State offices also have documentation of implemented Best Management Practices (BMPs) based on USDA NRCS standards and specification and the Chesapeake Bay Program's protocols and guidance. BMPs are traditionally used to reduce pollutant loads coming from nonpoint sources such as urban/suburban runoff, agriculture, and forestry activities.

References include: the USDA NRCS Technical Guide and Appendix H from the Chesapeake Bay Program (contact Kate Hopkins at hopkins.kate@epa.gov). Quality assurance program plans are available in each state office.

Data Quality Reviews: All data are reviewed and approved by the individual jurisdictions (NY, MD, PA, VA, WV, DE, and DC) before input to the watershed model. QA/QC is also performed on the input data to ensure basic criteria, such as not applying a BMP at a higher level than allowed. A specific level of input should yield output within a specified range of values. Output is reviewed by both the CBPO staff and the Tributary Strategy Workgroup as an additional level of QA/QC. Any values out of the expected range are analyzed and understood before approval and public release. The model itself is given a quarterly peer review by an outside independent group of experts. There have been no data deficiencies identified in external reviews.

Data Limitations: Data collected from voluntary collection programs are not included in the database, even though they may be valid and reliable. The only data submitted by state and local governments to the Chesapeake Bay Program Office are data that are required for reporting under the cost share and regulatory programs. Cost share programs include state and federal grant programs that require a recipient match. State and local governments are aware that additional data collection efforts are being conducted by non-governmental organizations; however, they are done independently of the cost share programs and are not reported.

Error Estimate: There may be errors of omission, misclassification, incorrect georeferencing, misdocumentation or mistakes in the processing of data.

New/Improved Data or Systems: The next version of the watershed model is currently under development and will be completed in 2008. The new version (phase 5) will have increased spatial resolution and ability to model the effects of management practices. The phase 5 watershed model is a joint project with cooperating state and Federal agencies. Contact Gary Shenk at gshenk@chesapeakebay.net or see the web site at http://www.chesapeakebay.net/phase5.htm

4-Year Performance Data
Annual Performance Goals and Measures

References:
See http://www.chesapeakebay.net/data/index.htm, refer to CBP Watershed Model Scenario Output Database, Phase 4.3. Contact Kate Hopkins at hopkins.kate@epa.gov or Jeff Sweeney jsweeney@chesapeakebay.net Reducing Pollution Summary (Controlling Nitrogen, Phosphorus and Sediment) indicators are published at http://www.chesapeakebay.net/status.cfm?sid=186. The nutrient and sediment loads delivered to the Bay data files used in the indicator are located at
http://www.chesapeakebay.net/pubs/statustrends/186-data-2003.xls. See "Chesapeake Bay Watershed Model Application and Calculation of Nutrient and Sediment Loadings, Appendix H: Tracking Best Management Practice Nutrient Reductions in the Chesapeake Bay Program, A Report of the Chesapeake Bay Program Modeling Subcommittee", USEPA Chesapeake Bay Program Office, Annapolis, MD, August 1998, available at
http://www.chesapeakebay.net/pubs/777.pdf
See USDA NRCS Field Office Technical Guide available at http://www.nrcs.usda.gov/technical/efotg/. The indicator and data survey is published at http://www.chesapeakebay.net/pubs/2007reports/IndicatorSurveyReducingPollution032906.doc
See "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability" (Technical Support Document) found at http://www.chesapeakebay.net/ecoanalyses.htm under "Part I: Documentation of Estimated Costs of the Tier Scenarios". The direct address is
http://www.chesapeakebay.net/pubs/doc-ecoanal-PartI.pdf. Specific cost information for agricultural practices begins on electronic page 59 and a summary table of unit BMP costs is on electronic page 93.

FY 2009 Performance Measures:

- **Percent of point source nitrogen reduction goal of 49.9 million pounds achieved [PART annual outcome measure- Chesapeake Bay Program]**
- **Percent of point source phosphorus reduction goal of 6.16 million pounds achieved [PART annual outcome measure-Chesapeake Bay Program]**

Performance Database: Point source nitrogen and phosphorus reductions are reported as % of goal achieved and pounds. The goal for point source nitrogen reductions is 49.9 million pound reduction from FY 1986 levels. The goal for point source phosphorus reductions is 6.16 million pound reduction from FY 1986 levels. Point source nitrogen and phosphorus data is reported based upon monitored results from the previous calendar year.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/127-data-2002.xls. Data have been collected 1985-2006 and are expected on an annual basis after 2006.

4-Year Performance Data
Annual Performance Goals and Measures

The FY 2009 Annual Performance Report for these measures will be based on the results of the 2008 data collection. We expect to receive the preliminary results for 2008 in September 2009.

Data Source: Each jurisdiction (NY, MD, PA, VA, WV, DE, and DC) tracks and approves annual point source effluent concentrations and flow data. It submits the data to the Chesapeake Bay Program Office. Contact; Ning Zhou, zhou.ning@epa.gov.

Methods, Assumptions and Suitability: Point source loads are calculated from measured or estimated values of effluent flows and concentrations. The Chesapeake Bay Program Phase 4.3 Watershed Model is the tool used to transform calculated point source discharge loads (generally, from monitored flow and concentration data) to nutrient loads delivered to Chesapeake Bay tidal waters.

Peer-reviewed methods are employed to estimate point source discharges where measured data are not available. Refer to: "Chesapeake Bay Watershed Model Application & Calculation of Nutrient & Sediment Loadings - Appendix F: Phase IV Chesapeake Bay Watershed Model Point Source Loads" at http://www.chesapeakebay.net/pubs/114.pdf; Quality Assurance Project Plan (QAPP) "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

The following methods/assumptions pertain to discharge data:

- Monitored discharge data are generated from the EPA-approved standard sampling and analysis methods and documented in the Data Monthly Reports from facilities to jurisdictions.
- Discharge data which date to the earlier years of the record are inadequate for many regions in the Bay watershed; however, the 1986 baseline is consistent throughout the record.
- Facilities have been added to the point source database over the years, not necessarily because they physically came on-line, but because they were previously untracked. In addition, facilities have been turned inactive in the point source database over time because they went off line or combined with other facilities as new plants.
- Protocols of calculating discharges from measured or estimated flows and effluent concentrations have been adjusted throughout the data record to better reflect actual end-of-pipe loads.
- Tributary-specific pollution reduction and habitat restoration plans ("Tributary Strategies") for some jurisdictions are not final so the goals will be adjusted in the future as jurisdictions update implementation plans that better reflect projected point source discharges.

QA/QC Procedures: Jurisdictions (NY, MD, PA, VA, WV, DE, and DC) providing point source effluent data to the Bay Program office are expected to submit documentation of their

quality assurance and quality control policies, procedures, and specifications in the form of Quality Assurance Management Plans and Quality Assurance Project Plans. Jurisdictional documentation, however, is limited and it is unknown if protocols follow EPA-approved objectives as established in the "Chesapeake Bay Program Quality Assurance Guidelines and Requirements" section of the CBP Grant and Cooperative Agreement Guidance, which is relevant to projects involving the collection of environmental data.

Procedures for compiling and managing point source discharge data at the Chesapeake Bay Program office are documented in the following EPA-approved Quality Assurance Project Plan: "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

Data Quality Reviews: Point source data sets from seven jurisdictions are merged at the Chesapeake Bay Program office. Continual peer-review of the thoroughness of discharge data and methods of managing the information by the Point Source Workgroup promotes consistency and completeness among the jurisdictions of calculated end-of-pipe loads.

Data Limitations: The CBP relies on information submitted and approved by the jurisdictions (NY, MD, PA, VA, WV, DE, and DC).

Error Estimate: The CBP tries to trace significant variability in the data and limit its impact.

New/Improved Data or Systems: N/A

References:

Study/survey design procedures for point source discharges can found at:

- "Chesapeake Bay Watershed Model Application & Calculation of Nutrient & Sediment Loadings - Appendix F: Phase IV Chesapeake Bay Watershed Model Point Source Loads" at http://www.chesapeakebay.net/pubs/114.pdf
- Quality Assurance Project Plan (QAPP) "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

The Point Source Nitrogen Loads Delivered to the Bay indicator is published at http://www.chesapeakebay.net/status.cfm?sid=127.
The Point Source Phosphorus Loads Delivered to the Bay indicator is published at http://www.chesapeakebay.net/status.cfm?sid=128.
The Wastewater Pollution Controls indicator is published at http://www.chesapeakebay.net/status.cfm?sid= 226.

4-Year Performance Data
Annual Performance Goals and Measures

The indicator and data survey are published at http://www.chesapeakebay.net/pubs/2007reports/IndicatorSurveyReducingPollution032906.doc

FY 2009 Performance Measure:

- **Percent of forest buffer planting goal of 10,000 miles achieved [PART annual outcome measure-Chesapeake Bay Program]**

Performance Database: Forest buffer planting is reported as % of goal achieved. The long term goal is to plant 10,000 miles of forest buffers. The information is based on cumulative acres planted since FY 1997 provided by the states for the previous calendar year.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/83-data-2002.xls. Data have been collected 1996-2006 and are expected on an annual basis after 2006.

The FY 2009 Annual Performance Report for these measures will be based on the results of the 2008 data collection. We expect to receive the preliminary results for 2008 in March 2009.

Data Source: Sampling design is formulated by the USDA for tracking projects and funds. Data and metadata are sent to the Forestry Work Group (state-level Departments of Forestry) by participating state coordinators and field personnel. Geographic Information System maps are produced by the UMD Center for Environmental Science. Contacts: Sally Claggett, sclaggett@fs.fed.us and Judy Okay, jokay@chesapeakebay.net

Methods, Assumptions and Suitability: Data collected for tracking linear ft, miles, and acres of forest buffers are measured directly. State data are merged to get cumulative miles. Submission criteria have been set and agreed to by State agencies. The data are summarized in a spreadsheet by geographic location with related extent of project sites. A Geographic Information System (GIS) is used to help generate the indicator data.

Data Quality Reviews: The data are collected by state field personnel and submitted to the state-level Departments of Forestry for QA/QC checks.

Data Limitations: The data are only as good as the data originally submitted by the states. This information passes through many hands before being merged into the annual cumulative miles. Human error enters into this type of record. The data are compiled and released with utmost attention to accuracy and validation of locations and extents of riparian forest buffers.

Error Estimate: none calculated.

New/Improved Data or Systems: N/A

References: The indicator is published at http://www.chesapeakebay.net/status.cfm?sid=83.

The indicator and data survey are published at http://www.chesapeakebay.net/pubs/2007reports/ForestBuffersRestoredIndicator030607.doc.

FY 2009 Performance Measures:

- **National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally (1-5 scale) [PART Long-term outcome measure tracked annually]**

- **Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.**

Performance Database: EMAP/NCA [Environmental Monitoring and Assessment Program/National Coastal Assessment] database (housed EPA/ORD/NHEERL/AED, Narragansett, RI)(Environmental Protection Agency/Office of Research and Development/National Health and Environmental Effects Research Laboratory/Gulf Ecology Division); pre-database information housed in ORD/NHEERL facility in Gulf Breeze, FL (Gulf Ecology Division) (pre-database refers to a temporary storage site for data where they are examined for QA purposes, have appropriate metadata attached and undergo initial statistical analyses); data upon QA acceptance and metadata completion are transferred to EMAP/NCA database and are web available at www.epa.gov/emap/nca. The final data are then migrated to the STORET data warehouse for integration with other water quality data with metadata documenting its quality.

Data Source: Probabilistic surveys of ecological condition completed throughout the Mid-Atlantic and Gulf of Mexico by EPA's Office of Research and Development (ORD) in 1991-1994, in southern Florida in 1995, in the Southeast in 1995-1997, in the Mid-Atlantic in 1997-1998, in each coastal state in 2000-2004 (except Alaska and Hawaii), in Alaska in 2002 and 2004, in Hawaii in 2002 and 2004, and in Puerto Rico in 2000 and 2004, and in other island territories (Guam, American Samoa and U.S. Virgin Islands) in 2004. Surveys collect condition information regarding water quality, sediment quality and biotic condition at 70-100 sites/Region (e.g., mid-Atlantic) each year of collection prior to 1999 and at 35-150 sites in each state or territory/year (site number dependent upon state) after 1999. Additional sampling by the National Estuary Program (NEP) included all individual national estuaries; the total number of sites within NEP boundaries was 30 for the two-year period 2000-2002.

These data are collected through a joint EPA-State cooperative agreement and the States follow a rigid sampling and collection protocol following intensive training by EPA personnel. Laboratory processing is completed at either a state laboratory or through a national EPA

contract. Data collection follows a Quality Assurance Project Plan (QAPP) (either the National Coastal QAPP or a variant of it) and QA testing and auditing by EPA.

Methods, Assumptions and Suitability: The surveys are conducted using a probabilistic survey design which allows extrapolation of results to the target population (in this case - all estuarine resources of the specific state.) The collection design maximizes the spatial spread between sites, located by specific latitude-longitude combinations. The survey utilizes an indexed sampling period (generally late summer) to increase the probability of encountering water quality, sediment quality and biotic condition problems, if they exist. Based on the QAPP and field collection manual, a site in a specific state is located by sampling vessel via Global Positioning System (GPS) and water quality is measured on board at multiple depths. Water samples are taken for chemistry; sediment samples are taken for chemistry, toxicity testing and benthic community assessment; and fish trawls are conducted to collect community fish data and provide selected fish (target species) for analysis of whole body and/or fillet contaminant concentrations. Samples are stored in accordance with field manual instructions and shipped to the processing laboratory. Laboratories follow QA plans and complete analyses and provide electronic information to the state or EPA. EPA and the state exchange data to ensure that each has a complete set. EPA analyzes the data to assess Regional conditions, whereas the states analyze the data to assess conditions of state-specific waters. Results of analyses on a national and Regional basis are reported as chapters in the National Coastal Condition Report (NCCR) series. The overall Regional condition index is the simple mean of the five indicators' scores used in the Coastal Condition Report (in the NCCR2 a recalculation method was provided for direct comparison of the successive reports). An improvement for one of the indicators by a full category unit over the eight year period will be necessary for the Regional estimate to meet the performance measurement goal (+0.2 over an eight year period).

Assumptions: (1) The underlying target population (estuarine resources of the United States) has been correctly identified; (2) GPS is successful; (3) QAPP and field collection manuals are followed; (4) all samples are successfully collected; (5) all analyses are completed in accordance with the QAPP; and (6) all combinations of data into indices are completed in a statistically rigorous manner.

Suitability: By design all data are suitable to be aggregated to the state and Regional level to characterize water quality, sediment quality, and biotic condition. Samples represent "reasonable", site-specific point-in-time data (not primary intention of data use) and an excellent representation of the entire resource (extrapolation to entire resource supportable). The intended use of the data is the characterization of populations and subpopulations of estuarine resources through time. The data meet this expectation and the sampling, response, analysis and reporting designs have been peer reviewed successfully multiple times. The data are suitable for individual calendar year characterization of condition, comparison of condition across years, and assessment of long-term trends once sufficient data are collected (7-10 years). Data are suitable for use in National Coastal Condition calculations for the United States and its Regions to

provide performance measurement information. The first long-term trends analysis will appear in the next NCCR (NCCRIII) representing trends between1990-2002.

QA/QC Procedures: The sampling collection and analysis of samples are controlled by a Quality Assurance Project Plan (QAPP) [EPA 2001] and the National Coastal Assessment Information Management Plan (IMP)[EPA 2001]. These plans are followed by all twenty-three coastal states and 5 island territories. Adherence to the plans are determined by field training (conducted by EPA ORD), field audits (conducted by EPA/ORD), round robin testing of chemistry laboratories (conducted by EPA/ORD), overall systems audits of state programs and national laboratory practices (conducted by EPA), sample splits (sent to reference laboratories), blind samples (using reference materials) and overall information systems audits (conducted by EPA/ORD). Batch sample processing for laboratory analyses requires the inclusion of QA samples in each batch. All states are subject to audits at least once every two years. All participants received training in year 2000 and retraining sessions are scheduled every two years.

Data Quality Reviews: Data quality reviews have been completed in-house by EPA ORD at the Regional and national level in 2000-2003 (National Coastal Assessment 2000-2003) and by the Office of Environmental Information (OEI) in 2003 (assessment completed in June, 2003 and written report not yet available; oral debriefing revealed no deficiencies). No deficiencies were found in the program. A national laboratory used in the program (University of Connecticut) for nutrient chemistry, sediment chemistry and fish tissue chemistry is being evaluated by the Inspector General's Office for potential falsification of laboratory results in connection with other programs not related to NCA. The NCA has conducted its own audit assessment and only one incorrect use of a chemical digestion method for inorganic chemistry samples (metals) was found. This error was corrected and all samples "digested" incorrectly were reanalyzed at no cost.

Data Limitations: Data limitations are few. Because the data are collected in a manner to permit calculation of uncertainty and designed to meet a specific Data Quality Objective (DQO) (<10% error in spatial calculation for each annual state estimate), the results at the Regional level (appropriate for this performance measure) are within about 2- 4% of true values dependent upon the specific sample type. Other limitations as follows: (a) Even though methodology errors are minimized by audits, in the first year of the NCA program (2000) some errors occurred resulting in loss of some data. These problems were corrected in 2001 and no problems have been observed since. (b) In some instances, (<5%) of sample results, QA investigation found irregularities regarding the precision of measurement (e.g., mortality toxicity testing of controls exceeded detection limit, etc.). In these cases, the data were "flagged" so that users are aware of the potential limitations. (c) Because of the sampling/ analysis design, the loss of data at a small scale (~ 10%) does not result in a significant increase in uncertainty in the estimate of condition. Wholesale data losses of multiple indicators throughout the U.S. coastal states and territories would be necessary to invalidate the performance measure. (d) The only major source of external variability is year-to-year climatic variation (drought vs. wet, major climatic event, etc.)

and the only source of internal variation is modification of reporting indicators (e.g., new indices, not a change in data collected and analyzed). This internal reporting modification requires a re-analysis of earlier information to permit direct comparison. (e) There is generally a 2-3 year lag from the time of collection until reporting. Sample analysis generally takes one year and data analysis another. Add another year for report production and peer review. (f) Data collections are completed annually; The EPA/ORD data collection collaboration will continue through 2004. Beginning in 2005, ORD began assisting OW, as requested, with expert advice, but discontinued its financial support of the program.

Error Estimate: The estimate of condition (upon which the performance measure is determined) has an annual uncertainty rate of about 2-3% for national condition, about 5-7% for individual Regional indicators (composite of all five states data into a Regional estimate), and about 9-10% for individual state indicators. These condition estimates are determined from the survey data using cumulative distribution functions and the uncertainty estimates are calculated using the Horvitz-Thompson estimator.

New/Improved Data or Systems:

(1) Changes have occurred in the data underlying the performance measure based on scientific review and development. A change in some reporting indicators has occurred in order to more accurately represent the intended ecological process or function. For example, a new eutrophication index was determined for the 2000 data. In order to compare this new index to the 1991-1994 data, the earlier data results must be recomputed using the new technique. This recalculation is possible because the underlying data collection procedures have not changed.

(2) New national contract laboratories have been added every year based on competition. QA requirements are met by the new facilities and rigorous testing at these facilities is completed before sample analysis is initiated. QA adherence and cross-laboratory sample analysis has minimized data variability resulting from new laboratories entering the program.

(3) The only reason for the discontinuation of the National performance goal would be the elimination of the surveys after 2004 or any other year thereafter.

In order to continue to utilize the 2001 National Coastal Condition report as the baseline for this performance measure, the original scores reported in 2001 have been re-calculated in the 2004 report using the index modifications described above (#1). These "new" results for the baseline (re-calculated scores) are reported in Appendix C of the 2005 report.

4-Year Performance Data
Annual Performance Goals and Measures

References:

1. Environmental Monitoring and Assessment Database (1990-1998) and National Coastal Assessment Database (2000- 2004) websites: www.epa.gov/emap and www.epa.gov/emap/nca (NCA data for 2000 is only data available at present)
2. National Coastal Assessment. 2000-2003. Various internal memoranda regarding results of QA audits. (Available through John Macauley, National QA Coordinator NCA, USEPA, ORD/NHEERL/GED, 1 Sabine Island, Gulf Breeze, FL 32561)
3. National Coastal Assessment. 2001. Quality Assurance Project Plan. EPA/620/R-01/002.(Available through John Macauley above)
4. National Coastal Assessment. 2001. Information Management Plan. EPA/620/R-01/003 (Available through Stephen Hale, NCA IM Coordinator, ORD/NHEERL/AED, 27 Tarzwell Drive, Narragansett, RI)
5. U.S. Environmental Protection Agency. 2001. National Coastal Condition Report. EPA-620/R- 01/005.
6. U.S. Environmental Protection Agency. 2004. National Coastal Condition Report II. In review Assigned Report Number EPA-620/R-03/002.

FY 2009 Performance Measure:

- **Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas**

Performance Database: EPA's "Surf Your Watershed" and EPA's WATERS Expert Query Tool

Data Source: Data regarding impaired segments are from EPA's "Surf Your Watershed" and EPA's WATERS Expert Query Tool updated every two years when states submit their 303(d) reports on the status of impaired water segments as required in the Clean Water Act (CWA) 305(b) report. Another source of data is the EPA-approved Decision Documents, the Quality Assurance Project Plan (QAPP) for state 303(d) data.

Methods, Assumptions and Suitability: To begin, the Decision Documents for each Gulf State are acquired. The water bodies listed as impaired for Florida, Alabama, and Mississippi are compared to "Surf Your Watershed" and then to the WATERS Expert Query Tool. Louisiana and Texas have a different form for their Decision Documents, which include only delisted water bodies. For these two states only "Surf Your Watershed" and WATERS Expert Query Tool are used. All the data are cross referenced for discrepancies. Then, tables are created for each watershed in the Gulf of Mexico Program's Priority Watershed Inventory. In all, 67 tables are created. These tables include a segment identification number for viewing the water segment on a map, a link to the URL for "Surf Your Watershed", name of the state basin the segment is located, the watershed the segment is located, the name of the waterbody, the number and type of impairment for that segment, and the year the impairment is listed. Delisting information is also

listed in the tables for segments that have that information. The information available for delisting includes the segment identification number, the waterbody name, what impairment was delisted, the basis for the delisting, and a link to the total maximum daily load (TMDL) document if it exists. Segments that are shared among two or more watersheds are highlighted for easier recognition when counting the number of segments duplicated among watersheds.

Shapefiles are acquired from the states that contain the 303(d) (e.g., impaired) segments for that state. The segments listed in the state shapefile, however, do not always match EPA's ("Surf Your Watershed", WATERS Expert Query Tool, and Decision Documents). Therefore, it is sometimes necessary to contact the state for additional shapefiles that contain missing segments. The data are grouped by watershed with a name to represent the area in the shapefile (ex. 2002_03170009_303d_line). New fields are added to the shapefile such as segment identification number (matches the number from the tables), TMDL status ("Impaired Water Segment," "TMDL Completed," "Restored"), number of impairments for that segment, list of impairments for that segment, and the waterbody name for that segment. Maps are then generated to show the number of impairments in each watershed. "Impaired Water Segments" are visible with a red cross hatch, "TMDL Completed" has a yellow cross hatch, and a "Restored" appears with a blue cross hatch. Each segment is labeled with the identification number found in the shapefile and the table. All maps include the Hydrologic Unit Code (HUC) number and the HUC name, legend, scale bar, inset map, GMPO logo, disclaimer for the state if one was provided, and the date the map was created. In all, 67 maps are created.

QA/QC Procedures: There are three EPA data sources: "Surf Your Watershed," "WATERS," and Decision Documents. Each data source is cross referenced with the other two sources to ensure there are no discrepancies in the listed impaired segments. The EPA data sources are from EPA- reviewed state documents.

Data Quality Reviews: There are no outside reviews of the 67 tables and maps generated in a report. However, GMPO is awaiting final approval of new web pages that will display them. This new site will be a subset of "Surf Your Watershed" and will be labeled as "Surf Your Gulf Watershed". "Surf Your Gulf Watershed" will detail the impaired segments for the 13 priority areas.

Data Limitations: Data are updated every two years on "Surf Your Watershed" and in WATERS Expert Query Tool due to the fact that states submit a 303(d) report every two years on the status of the impaired segments in each state as required in Clean Water Act (CWA) 305(b) report.

Error Estimate: None identified.

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References:
EPA's "Surf Your Watershed" http://cfpub.epa.gov/surf/locate/map2.cfm

EPA's WATERS (Watershed Assessment Tracking and Environmental Results) Expert Query Tool http://www.epa.gov/waters/tmdl/expert_query.html

FY 2009 Performance Measure:

- **Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.**

Performance Database: Coastal Emergent wetlands border the Gulf of Mexico and include tidal saltwater and freshwater marshes and mangroves. Encompassing over two million hectares (five million acres or more than half of the national total), the Gulf of Mexico coastal wetlands serve as essential habitat for a diverse range of species.

Total wetland loss (coastal and inland) for the five Gulf States from 1780 until 1980 was estimated to be 40 million square kilometers, approximately 50%. Between 1985 and 1995 the southeastern U.S. lost the greatest area of wetland (51% of the national total).
Coastal emergent wetland loss for Louisiana represents 67% of the nation's total loss (177,625 hectares or 438,911 acres) from 1978 to 1990.

The Gulf of Mexico Program achieves its acreage goal each year by cooperative funding of projects that result in the enhancement, protection or restoration of coastal habitat. This coastal habitat includes marshes, wetlands, tidal flats, oyster beds, seagrasses, mangroves, dunes and maritime forest ridge areas.

Data Source: The amount of acreage restored, protected and enhanced by the Gulf of Mexico Program is derived from the individual project's Statement of Work contained within the project proposal. This acreage is then verified by the EPA Project Officer and by the project's Program Manager through site visits during the life of the project, quarterly reports submitted to the Gulf of Mexico Program Office (GMPO), aerial photography, ground-truthing, and digital topographic. Data verification occurs at the end of the project too.

Methods, Assumptions and Suitability: The Gulf of Mexico Program achieves this goal successfully each year by cooperatively funding restoration projects with our multiple federal and state program partners. Our partners additionally follow required QA/QC procedures on their projects and routinely conduct site visits to provide verification of the acreage restored. These partners and our process to restore, protect and enhance Gulf coastal habitat include:
1. Gulf of Mexico Program Office State Proposal Solicitation through Requests for Proposals (RFPs)

2. GMP Partnership Challenge Grant Programs
   A) National Fish and Wildlife Foundation (NFWF) Cooperative Agreement
   5- STAR Habitat Restoration Challenge Grants
   Shell Marine Habitat Restoration Grants
   B) NOAA Community Restoration Grant Program Supports Gulf Ecological Management Sites (GEMS)

http://www.epa.gov/gmpo/habitat/hablinks.html

QA/QC Procedures: The projects that are funded are required to provide a QA/QC plan if the restoration project involves monitoring. In those cases, EPA has documented Assistance Agreements with QA/QC approved plans. Both NOAA and the National Fish and Wildlife Foundation require QA/QC plans if the projects involve scientific monitoring. Additionally, the EPA Project Manager is required to conduct site visits, during the duration of the project to verify actual acreage restored, protected and/or enhanced. QA/QC includes but is not limited to, aerial photography, groundtruthing, transect growth monitoring and routine site visits of all funded projects.

Data Quality Reviews: Award Process for supporting habitat at restoration projects through partnership cooperative agreements.

1. Gulf of Mexico Program Office Competitive RFPs
2. GMP Partnership Challenge Grant Program Grants

   A) National Fish and Wildlife Foundation (NFWF)

   5-STAR Projects - Habitat office staff and team members review proposals, rank and recommend projects for funding. This review includes identification of any duplicative proposals already submitted for funding through other grant programs supported by GMPO, as well as opportunities to broker with other habitat grant funding programs, i.e. through Coastal America and the Corporate Wetlands Restoration Partnership Grant Program (CWRP)

   Shell Marine Habitat Restoration Grants - Habitat team reviews and ranks proposals.

   B) NOAA Community Restoration Grant Program

   Supports Gulf Ecological Management Sites (GEMS). The Gulf of Mexico Foundation, NOAA and the Gulf of Mexico Program established a Steering Committee to review and select the NOAA CRP projects for funding. The steering committee consists of EPA, all GEMS State Managers, NOAA, and USFWS staff. As with our partnership with the National Fish and Wildlife Foundation, the review is to ensure there is no duplication of funding and to seek opportunities for brokering with other restoration grant programs.

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Review of the restoration data occurs in the field and through field analysis by the project manager as the project progresses. This review is accomplished through measures such as aerial photography, groundtruthing, transect growth monitoring and routine site visits of all funded projects. Data are verified by EPA and our Program Partners through site visits and quarterly reports.

Data Limitations: Limitations of use for the data are carefully detailed by the data provider and project manager for each project that yields acreage. Images and topographic data have routinely been used for restoration projects and few to no limitations are expected from these datasets beyond that of image resolution.

Error Estimate: The acreage is documented by the project managers for each project in required EPA Quarterly Reports. Data are subject to a second verification following the completion of the project.

References:

Status and Trends of the Nation's Biological Resources, Volume 1. U.S. Department of the Interior, U.S. Geological Survey, National Wetlands Research Center, 1998

Conservation Challenge; FL,AL,MS,LA,TX Coastal Regions, National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, Gulf of Mexico Program MX 984769 Project Period: 8/06/1999- 12/31 0/2007. Website: http://www.nfwf.org

The Gulf Community Restoration Partnership Program (GCRP). This program provides acreage through the combined efforts of the NOAA Community-Based Restoration Program and the Gulf of Mexico Program's Gulf Ecological Management Sites (GEMS) program and the Gulf States natural resource agencies and the Gulf of Mexico Foundation. Website: http://www.gulfmex.org/restoration.htm

SIR 2006-5287: Seagrass Status and Trends in the Northern Gulf of Mexico: 1940-2002 http://pubs.usgs.gov/sir/2006/5287/

FY 2009 Performance Measures:

- **Achieve no net loss of stony coral cover in the Florida Keys National Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida working with all stakeholders (federal, state, regional, and local)**
- **Maintain the overall health and functionality of seagrass beds in the FKNMS as measured by the long-term seagrass monitoring project that addresses composition and nutrient availability**
- **Maintain the overall water quality of the near shore and coastal waters of the FKNMS**

4-Year Performance Data
Annual Performance Goals and Measures

Performance Database: As required by the Florida Keys National Marine Sanctuary and Protection Act of 1990, EPA and its partners developed a comprehensive long-term status and trends monitoring program as a critical component of the Water Quality Protection Program for the FKNMS. The comprehensive monitoring program was initiated in 1995 and includes water quality, coral reef and seagrass components. Annual results are reported each year on a fiscal-year basis. Historically, EPA has provided the majority of funding for the three monitoring projects, but other agencies (e.g., NOAA, U.S. Army Corps of Engineers (USACOE), and state/local government agencies) also provide significant funding.

Data Source: The Water Quality and Seagrass Monitoring Projects are conducted by Florida International University's Southeast Environmental Research Center (SERC) and the Coral Reef Evaluation and Monitoring Project is conducted by the Florida Fish and Wildlife Research Institute. EPA provides funding via cooperative agreements and the other government agencies provide funds via federal assistance agreements or contracts. Monitoring data are collected each year on an annual or quarterly basis depending on the project. Results of each monitoring project are reported in annual reports. The data for each monitoring project is collected and archived by staff of the Florida Fish and Wildlife Research Institute under a cooperative agreement with the EPA. In addition, the principal investigators for each monitoring project have developed Web sites where anyone can go and review the data.

Methods, Assumptions and Suitability: The comprehensive monitoring program for the FKNMS was developed by a large group of technically competent and knowledgeable scientists familiar with the aquatic environment of the Florida Keys and the coral reef ecosystem. For each monitoring project, EPA worked closely with recognized experts to develop a detailed scope of work including sampling locations and frequency, parameters, field and analytical methods, quality assurance/quality control, data management, and reporting. The monitoring program was designed to provide representative coverage of the entire 2,900 square nautical miles of the Sanctuary. In general, monitoring sites were located throughout the FKNMS on a stratified-random basis and were determined to be compatible with EPA's Environmental Monitoring and Assessment Program protocol (http://www.epa.gov/region4/sesd/reports/epa904r01002.html). The overall monitoring program was designed to address the primary objective of the comprehensive long-term monitoring program for the FKNMS - to provide data needed to make unbiased, statistically rigorous statements about the "status of and trends in" selected water quality conditions and biological communities in the Sanctuary. For the monitoring program, the null hypothesis is that there is no change over time. The field data are tested against the null hypothesis that no change has occurred. All three monitoring projects (water quality, coral reef and seagrass) have demonstrated the ability to detect change over time and are suitable for determining the health of the coral reef ecosystem of the FKNMS.

QA/QC Procedures: The principal investigators for each monitoring project developed and submitted to EPA a Quality Assurance Project Plan (QAPP) to ensure that the data generated are

accurate and representative of actual conditions and the degree of certainty of the data can be established. The QAPPs were developed in accordance with EPA guidance documents and the principal investigators consulted with the Regional QA/QC Officer and the Project Officer for the monitoring projects. It was required that the QAPP be approved by EPA before any work could begin on a monitoring project.

Data Quality Review: Through the QAPP, the principal investigators explicitly commit to incorporating procedures that will reduce random and systematic errors. In addition, the principal investigators document quality assurance procedures and evaluate the quality of the data being generated by the monitoring projects. Further, the Technical Advisory Committee (TAC) of the Florida Keys National Marine Sanctuary reviews and assesses the monitoring projects and the data they produce on a regular and continuing basis.

Data Limitations: There are no known limitations of the data set.

Error Estimate: Coral Reef Evaluation and Monitoring Project – a power analysis was done at the beginning of the project to determine the limit of detectable change for the point count method used to determine the percent stony coral cover within the FKNMS. The estimate of actual performance is accurate to 2.4%.

Water Quality Monitoring Project – the project collects data from 154 sites within the FKNMS on a quarterly basis. Therefore, error estimates for the 2005 baseline values are mostly due to the large spatial variability and seasonal temporal variability. Because water quality data are not normally distributed, the project uses the median as the measure of central tendency. For chlorophyll a, the interquartile range (IQR) is 0.29 and the median absolute deviation (MAD) is 0.12. The light attenuation k_d IQR is 0.12 and the MAD is 0.05. Dissolved inorganic nitrogen has an IQR of 0.50 and a MAD of 0.26. For total phosphorus, the IQR is 0.90 and the MAD is 0.04.

Seagrass Monitoring Project – benthic plant community structure is measured using the rapid visual assessment technique known as the Braun-Blanquet method. This method is very quick, yet it is robust and highly repeatable, thereby minimizing among-observer differences. The Braun-Blanquet method has proven to be precise enough to detect subtle interannual variations yet robust enough to survive changes in personnel. A summary metric or species composition indicator (CSI) that assesses the relative importance of slow-growing plants to community composition is being computed for the 30 permanent seagrass monitoring sites. During the first 10 years of monitoring, this CSI index had an average of 0.48 $\pm$ 0.04 ($\pm$ one standard error of the mean). The significance of changes in the SCI will be assessed using these distribution parameters. Elemental content (carbon, nitrogen, and phosphorus) of seagrass leaves is determined by cleaning the leaves of all epiphytes, drying the leaves at low temperature, and grinding to a fine powder. Elemental content is then measured using established methods and calculating on a dry weight basis. Analyses are run in duplicate using independent NIST-

traceable for each determination. If the duplicate analyses differ by more than 10%, additional samples are run. A summary elemental content indicator metric or elemental indicator (EI), which is the mean absolute deviation of the N:P ratio of seagrass tissue from 30:1 is computed for the 30 permanent monitoring sites. In 2006, the mean EI was 8.28 + 1.47 (+ one standard error of the mean). The significance of changes in the EI will be assessed using these distribution parameters.

New/Improved Performance Data or Systems: The database management system for the Water Quality Protection Program of the FKNMS is geographic information based (GIS) and used to record the biological, physical, and chemical results from the comprehensive monitoring projects. The data from the three monitoring projects are collected and archived by the database managers at the Florida Fish and Wildlife Research Institute. The data archives component encompasses both raw and synthesized data. The data integration component incorporates the synthesized data, both tabular and geospatial. These data are integrated into a GIS to facilitate further analysis by scientists and managers. The results data contained within the database integration system are documented with project level metadata as well as attribute or parameter level metadata. Tools are being further developed to allow users to query data by location, date and parameters collected. The overall goal of the database management system is to provide a data integration system that takes into account the varying levels of data produced by the various monitoring projects and the needs of both managers and researchers.

References:
http://serc.fiu.edu/wqmnetwork/
www.serc.fiu.edu/wqmnetwork
www.fiu.edu/~seagrass
http://ocean.floridamarine.org/fknms_wqpp
http://research.myfwc.com/features/category_sub.asp?id=2360

FY 2009 Performance Measure:

- **Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 parts per billion total phosphorus criterion throughout the Everglades Protection Area marsh**

Performance Database: As required by the Clean Water Act and Florida's Everglades Forever Act, the oligotrophic Everglades marsh within the Everglades Protection Area must meet the newly adopted 10 parts per billion numeric criterion for total phosphorus. EPA approved the criterion and its application methodology in 2005. A monitoring program to determine whether the criterion is in fact being met throughout the Everglades marsh is necessary to determine whether the water body can be expected to meet its designated use, whether phosphorus concentrations are stable or are increasing, whether the concentrations in impacted areas are

improving, and whether watershed phosphorus control efforts costing in excess of $1 billion are effective.

Data Source: Water quality is monitored throughout the Everglades marsh at dozens of long-term monitoring stations. These stations are sampled cooperatively in a joint effort by Florida Department of Environmental Protection, South Florida Water Management District, Everglades National Park, and Loxahatchee National Wildlife Refuge. Some of these stations were monitored previously by the United States Geological Survey beginning as long ago as 1953. Results of monitoring are reported in annual reports. The data are collected and are available to the public through a web site. Stormwater Treatment Area (STA) effluent phosphorus monitoring is in place as required by Florida and NPDES permits.

Methods, Assumptions and Suitability: The monitoring program was developed by scientists, with decades of experience regarding Everglades water quality and ecology, from the Florida Department of Environmental Protection, South Florida Water Management District, Everglades National Park, Loxahatchee National Wildlife Refuge and the EPA. The marsh monitoring program is designed to provide representative coverage of the entire 2,000 square mile freshwater Everglades. The monitoring program is capable of detecting temporal trends in phosphorus condition throughout the Everglades. The null hypothesis is that there is no change over time.

QA/QC Procedures: Field samples are collected by standard sampling protocol and analytical results are from accredited laboratories using standard methods. In addition, a series of ongoing laboratory round-robin exercises are overseen by the Florida Department of Environmental Protection. Field and lab protocol are also periodically reassessed by a Technical Oversight Committee that includes five Florida and federal agencies. Quality Assurance Project Plans are in place.

Data Quality Review: Water is sampled in the field by Department of Interior or South Florida Water Management District technical personnel using established Standard Operating Procedures. Data are subject to ongoing quality review by the interagency Technical Oversight Committee on a regular and continuing basis.

Data Limitations: There are no known limitations of the data set.

Error Estimate: Annual average total phosphorus concentrations are accurate to within 0.1 part per billion.

New/Improved Performance Data or Systems: Interagency dialogue and oversight provide ongoing reassessments that evaluate data credibility and completeness.

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4-Year Performance Data
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References:
http://www.epa.gov/waterscience/criteria/nutrient/ecoregions/
http://www.sfwmd.gov/org/ema/toc/index.html
http://www.sfwmd.gov/org/ema/toc/archives_docs.html
http://www.dep.state.fl.us/labs/assessment/index.htm
http://www.dep.state.fl.us/labs/everglades/roundrobin.htm
http://wwwalker.net/#Selected%20Publications

FY 2009 Performance Measure:

- **Percent of the population in each of the U.S. Pacific Island Territories served by community drinking water systems will receive drinking water that meets all applicable health-based drinking water standards throughout the year** (2005 Baseline: 95 percent of the population in American Samoa, 10 percent in CNMI (Commonwealth of the Northern Mariana Islands), and 80 percent of Guam served by community water systems received drinking water that meets all applicable health-based drinking water standards throughout the year.)

Performance Database: SDWIS (Safe Drinking Water Information System) is the database used to track this performance measure throughout the United States. However, of the three U.S. territories in the Pacific, only American Samoa has put data into this database on a reliable basis. (For example, Guam has not entered data in this database in years. We are working with CNMI and Guam in 2007 to enter data into SDWIS on a reliable basis.) In the interim, in Guam and CNMI we are working to get the data directly from the public water systems.

Data Source: Health-based violations are either reported by the territories (currently American Samoa only) or obtained through direct communication with public water systems (currently Guam and CNMI). Percentage of population served by community drinking water systems receiving 24-hour water is obtained through direct communication with territory (CNMI only). Population data are obtained from U.S. Census data.

Methods, Assumptions and Suitability: Our method is to calculate the performance measure as the percentage of people in the territories served by public water systems who are receiving 24-hour water that meets all health-based drinking water standards (i.e., no health-based violations). We can provide an aggregate value for the three Pacific territories using a weighted average based upon their populations. Our first main assumption is that a public water system must provide 24-hour water on a regular basis before it can provide drinking water that meets all health-based drinking water standards. This is an assumption that generally does not need to be made in the rest of the United States; and in the Pacific territories is an issue mainly in the CNMI. For example, the island of Saipan in the Northern Mariana Islands (population 70,000) is the only municipality of its size in the U.S. without 24-hour water (most of its residents get water only one or two hours per day; all but the poorest residents rely on bottled water or rain water as

the source of their drinking water). This method is suitable for the Pacific islands because the situation is unique to the Pacific Island territories, and is one of the underlying reasons for the need to track access to safe drinking water. Our second main assumption is that health-based violations reported by the territories are correct. Our third main assumption is that US Census data are correct.

QA/QC Procedures: American Samoa follows QA/QC procedures in the data it submits to EPA for entry into the SDWIS database. There is no other Quality Management Plan or Quality Assurance Project Plan currently associated with this indicator.

Data Quality Reviews: Although the territories are responsible for reviewing and assuring quality of health-based violation reporting, EPA has had to communicate directly with public water systems in Guam and CNMI to get the data (and continues to do so as part of ongoing enforcement and compliance efforts). EPA is also in direct communication with the territories to obtain percentage of population receiving 24-hour water. The US Census is responsible for reviewing and assuring population data quality. There is no other peer review or external data quality review.

Data Limitations: Potential data limitations include: (a) inconsistencies in reporting health-based violations among territories; and (b) inaccuracies due to imprecise measurement of percentage of population served by public water systems that receives 24-hour water.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: Regarding SDWIS data, EPA will be working with the territories of Guam and CNMI in 2007 to provide more complete data to assess performance. Regarding percentage of population receiving 24-hour water, EPA will be working closely with the CNMI public water system and the CNMI Water Task Force (in the Office of the Governor) to both more accurately assess percentage of population receiving 24-hour water, and to provide 24-hour water to a greater percentage of the population.

References: N/A.

FY 2009 Performance Measure:

- **Percent of time sewage treatment plants in the U.S. Pacific Island Territories will comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS)** (2005 Baseline: the sewage treatment plants in the Pacific Island Territories complied 59 percent of the time with BOD and TSS permit limits.)

Performance Database: ICIS (Integrated Compliance Information System) is used to track this performance measure.

Data Source: DMRs (Discharge Monitoring Reports) provided to EPA on a quarterly basis by the Pacific Island wastewater utilities are the data source.

Methods, Assumptions and Suitability: Permit conditions require each of the wastewater utilities to use EPA approved sampling methods. DMRs are self-reported by the Pacific island utilities to EPA on a quarterly basis for major facilities (greater than 1 million gallons per day of discharge). The main assumption is that the self-reported data are accurate.

QA/QC Procedures: Each of the Pacific island utility labs has and follows QA/QC procedures for this data.

Data Quality Reviews: EPA reviews the DMR reports to make sure they are thoroughly filled out. There are occasional EPA field audits of the utility labs.

Data Limitations: Potential data limitations include: (a) inconsistencies among personnel in performing sampling and analysis; and (b) incomplete data due to lack of sampling or lack of lab equipment.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: EPA maintains communication with each of the utilities to improve sampling and analysis of BOD and TSS, and to improve reporting of DMRs.

References: N/A

FY 2009 Performance Measure:

- **Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming.** (2005 Baseline: beaches were open and safe 64 percent of the 365-day beach season in American Samoa, 97 percent in CNMI and 76 percent in Guam.)

Performance Database: PRAWN ((Program tracking for Advisories, Water quality and Nutrients) is used to track this performance measure.

Data Source: Reports provided to EPA on a quarterly basis by the Pacific Island environmental agencies (Guam EPA, American Samoa EPA, CNMI DEQ) are the data source.

Methods, Assumptions and Suitability: The Pacific Island environmental agencies use EPA-approved methods to take bacteriological samples at beaches and analyze them in their labs. They put together reports that include beach sampling data and number of days beaches were

closed or had advisories posted based on bacteriological concerns. The Pacific Island environmental agencies submit these reports to EPA on a quarterly basis. EPA inputs data from the report into the PRAWN database. The main assumption is that the Pacific Island environmental agencies are following the EPA-approved methods for sampling and analysis. The secondary assumption is that EPA's contractor is correctly entering data from the reports.

QA/QC Procedures: Each of the Pacific Island environmental agencies has EPA-certified laboratories. Part of the certification process is establishing and adhering to QA/QC procedures.

Data Quality Reviews: EPA recertifies the labs on a periodic basis. Data quality from all lab procedures is reviewed.

Data Limitations: Potential data limitations include: (a) reporting inconsistencies within the database among jurisdictions which report on a quarterly basis (as the Pacific territories do) and on an annual basis.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: EPA maintains communication with the Pacific territorial environmental agencies on changes in format which make it easier to enter data into the PRAWN database.

References: N/A.

FY 2009 Performance Measure:

- **Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed.**

Performance Database: The database used to track habitat restoration in the Lower Columbia River watershed is titled "Regional Restoration Project Inventory". The database includes at a minimum the following data fields: Project title, lead organization, project partners, latitude/longitude, and acreage. Results are updated annually on a fiscal year basis.

Data Source: Habitat restoration data are reviewed through direct communication with multiple agencies and partners conducting habitat restoration projects in the Lower Columbia River watershed, and the database is cross-referenced with other state, regional, and federal funding sources and project tracking databases. Due to the numerous partners involved in each project, and their involvement in the maintenance of the database, the confidence in the data accuracy and reliability is high.

4-Year Performance Data
Annual Performance Goals and Measures

Methods, Assumptions and Suitability: Habitat restoration data in the Lower Columbia River watershed is collected and tracked via direct and ongoing communication with the network of agencies and organizations conducting habitat restoration in the watershed. The main assumption for this method is that all agencies and organizations conducting habitat restoration in the watershed are included in the database review. The acreage indicator chosen is suitable for progress towards our goal because the restoration projects included in the database protect, enhance, and restore both wetland and upland habitat.

QA/QC Procedures: The database is reviewed by entities involved in or conducting habitat restoration projects in the Lower Columbia River watershed. The database is maintained annually, reviewed internally, distributed to regional entities conducting habitat restoration, and referenced when reporting several times annually.

Data Quality Reviews: The Regional Restoration Project Inventory is a database and reporting tool that employs the available level of project detail by multiple agencies and organizations. This tool is used internally and amongst agencies and organizations conducting habitat restoration in the Lower Columbia River watershed, therefore peer reviews, audits, and reports by external groups are not applicable.

Data Limitations: Potential data limitations include: (a) inconsistencies in or non-standard methods of acreage measurement, due to multiple agencies and organizations reporting; (b) inaccuracies due to imprecise measurement of acreage; (c) significant variability in the data, due to advancements in acreage calculation methods and therefore variable accuracy over time; (e) incomplete or inaccurate data from agencies and organizations that choose not to submit or review project data.

Error Estimate: Based on the level of involvement from agencies and organizations conducting habitat restoration in the Lower Columbia River, the quantitative estimate of actual performance and calculation of error in the database is not possible.

New/Improved Data or Systems: The tracking of habitat restoration project data in the Lower Columbia River watershed will improve with the advancement of tracking technologies, including GIS analysis, and the maintained communication with agencies and organizations conducting habitat restoration in the watershed. The management of the database will adapt to these advancements when technically and feasibly possible.

References: Lower Columbia River Restoration Inventory can be found at: http://www.lcrep.org/habitat_inventory.htm

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4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Clean-up acres of known contaminated sediments.**

Performance Database: EPA's Regional Office will maintain a database of Columbia River data from the sources described below. Clean-up data are likely to be generated at Bradford Island, managed by the U.S. Army Corps of Engineers and the Oregon Department of Environmental Quality (ODEQ); Portland Harbor, an EPA Superfund site; and other small RCRA clean-up sites managed by ODEQ on the Columbia River.

Data Source: Information will be collected from state, federal and local agency partners. Information from the Bradford Island clean-up will be collected by the U.S. Army Corps of Engineers and the Oregon Department of Environmental Quality (ODEQ). Information from the Portland Harbor Superfund site will be collected by EPA and other partners. Information from RCRA clean-up sites will be collected by ODEQ. EPA directly oversees the work at Superfund sites; for clean-up sites managed by other entities, like the Corps of Engineers, EPA accepts the information received but does not independently verify the information.

Methods, Assumptions and Suitability: Acres are the unit of measurement used. Acreage reporting will be from EPA for Superfund work efforts and for non-Superfund work, acreage will be provided by state, federal and local agency partners.

QA/QC Procedures: EPA's Regional staff collect primary data based on site documents related to individual clean-up activities. EPA directly oversees the work at Superfund sites; for clean-up sites managed by other entities, like the Corps of Engineers, EPA accepts the information received but does not independently verify the information. There are Quality Assurance Project Plans (QAPPs) for individual sediment clean-up projects.

Data Quality Review: Sediment clean-up projects, such as those included under this measure, are very expensive. Closely managed construction projects are carried out by contractors under strict oversight by responsible parties (e.g., the Corps). The actual clean-up work is carefully overseen by parties with huge financial interests at stake and there is little realistic opportunity for significant error in counting acres addressed. Also, there is close monitoring of sediment data quality, as this is an objective of these clean-up projects.

Data Limitations: The actual clean-up work is carefully overseen by parties with huge financial interests at stake and there is little realistic opportunity for significant error in counting acres addressed. There is close monitoring of sediment data quality, as that is the objective of these cleanup projects.

Error Estimate: No error estimate is available for this data.

4-Year Performance Data
Annual Performance Goals and Measures

New/Improved Data or Systems: N/A

References: http://www.deq.state.or.us/lq/ecsi/ecsi.htm

FY 2009 Performance Measure:

- **Restore the acres of tidally- and seasonally-influenced estuarine wetlands. [Puget Sound]**

Performance Database: This measure is closely related to acres protected or restored for the National Estuary Program (NEP) measure. Puget Sound is one of 28 estuaries in the NEP. The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The National Estuary Program On-Line Reporting Tool (NEPORT) is a web-based database that EPA developed for NEPs to submit their annual Habitat reports. Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport . Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Data Source: The Puget Sound Partnership is the current home for the Puget Sound NEP. It works with its partners to document the number of acres of habitat restored and protected. EPA conducts regular reviews of NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported, or of the estuary overall, but it is a suitable measure of on-the-ground progress. Habitat acreage does not necessarily correspond one-to-one with habitat quality, nor does habitat (quantity or quality) represent the only indicator of ecosystem health. Nevertheless, habitat acreage serves as an important surrogate and a measure of on-the-ground progress made toward EPA=s annual performance goal of habitat protection and restoration in the NEP. "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include created areas, protected areas resulting from acquisition, conservation easement or deed restriction, submerged aquatic vegetation coverage increases, permanent shellfish bed openings, and anadromous fish habitat increases.

QA/QC Procedures: Primary data are 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). The NEP staff is requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA then confirms that the national total accurately reflects the information submitted by each program. EPA actions are consistent with data quality and management policies.

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: No audits or quality reviews conducted yet.

Data Limitations: Current data limitations include: information may be reported inconsistently (based on different interpretations of the protection and restoration definitions), acreage may be miscalculated or misreported, and acreage 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 restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting), but is rather a measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where these projects are located in each NEP study area. Not only does this assist both the individual NEP and EPA in obtaining a sense of geographic project coverage, but it provides a basis from which to begin exploring cases where acreage may be double-counted by different agencies. An on-line reporting system—NEPORT-- has been developed for the NEPs use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport.

FY 2009 Performance Measure:

- **Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degraded or declining water quality. [Puget Sound]**

Performance Database: This measure is related to acres protected or restored for the National Estuary Program (NEP). Puget Sound is one of 28 estuaries in the NEP. The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. Upgrading shellfish bed classifications is included. The National Estuary Program On-Line Reporting Tool (NEPORT) is a web-based database that EPA developed for NEPs to submit their annual Habitat reports. Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport. Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Data Source: The Puget Sound Partnership is the current home for the Puget Sound NEP. It works with its partners to document the number of acres of habitat restored and protected. With

respect to shellfish bed classification the Washington State Department of Health (WDOH) is the entity that determines and tracks the status of shellfish beds. EPA conducts regular reviews of NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of shellfish beds with harvest restrictions lifted is not a direct measure of habitat quality, but it is a measure of improving water quality with respect to fecal coliform contamination. This acreage serves as an important surrogate for water quality and human health protection in Puget Sound.

QA/QC Procedures: The Washington Department of Health does the sampling and analysis, which forms the basis of their shellfish bed status determinations. They have established QA/QC procedures. NEP staff utilize the State reported data on areas that have been the subject of restoration efforts.

Data Quality Review: No audits or quality reviews of the primary data have been conducted by EPA.

Data Limitations: Data are limited to the commercial shellfish beds which are monitored by the WDOH.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where these projects are located in each NEP study area. An on-line reporting system—NEPORT-- has been developed for the NEPs= use that will assist in tracking habitat projects.

References: Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport.

FY 2009 Performance Measure:

- **Remediate acres of prioritized contaminated sediments. [Puget Sound]**

Performance Database: EPA's Regional office will maintain a database of Puget Sound contaminated sediment remediation using the Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) used by the Agency's Superfund program. The CERCLIS database contains information on the types of contaminated sediments/ toxics present in selected sites, as well as some baseline data against which remediation results may be derived.

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4-Year Performance Data
Annual Performance Goals and Measures

Data Source: The CERCLIS database tracks Superfund sites only. Superfund site information includes remedial designs, feasibility studies and projects at contaminated sediment sites where remedial actions plans have been implemented. The CERCLIS database also tracks Federal completions, e.g., Superfund sites where federal clean-up activities have been completed.

Methods, Assumptions and Suitability: The CERCLIS database documents the remedial actions and Federal completions of projects to clean-up Superfund sites. Within Puget Sound, a Federal completion could correlate to a specific contaminated sediment site and the number of acres that were remediated. Actual data on the number of acres remediated will be in background documents related to the particular remediation project. Activities completed, which include prioritized contaminant remediation (removal, capping, or other remedial strategies), will count in terms of acres, or portions of an acre remediated. Other databases, such as the EPA Brownfields program database and the RCRA-Online database may be useful as additional sources of contaminated sediment remediation data for the Puget Sound sites. These additional databases may be considered in the future.

QA/QC Procedures: Primary data are prepared by the Superfund staff based on site documents related to individual clean-up activities. EPA directly oversees the work at Superfund sites. There are standard operating procedures and data control procedures applied to CERCLIS data. Data are reviewed quarterly and the data control plan is reviewed annually. There are Quality Assurance Project Plans (QAPPs) for individual sediment clean-up projects.

Data Quality Review: Sediment clean-up projects, such as those included under this measure, are very expensive. Closely managed construction projects are carried out by contractors under strict oversight by EPA. There is close monitoring of sediment data quality, as this is an objective of these clean-up projects too. EPA does periodic audits or quality reviews on Superfund site data and the CERCLIS database.

Data Limitations: At this time, data on contaminated sediment remediation within Puget Sound in the CERCLIS database are limited to sites where an EPA Superfund remediation plan has been developed and implemented. The CERCLIS database only recently began tracking the number of acres cleaned up and the specific sites where contaminated sediment remediation has occurred. A new module for tracking this site-specific data was added to the database in June 2007.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: At present, the EPA Regional office plans to use the existing CERCLIS database to manage data for the performance measure.

References: Link to the Superfund Site Information System at http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm

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4-Year Performance Data
Annual Performance Goals and Measures

GOAL 4 OBJECTIVE 4

FY 2009 Performance Measures:

- **Improved protocols for screening and testing (PART Measure)**
- **Effects and exposure milestones met (PART Measure)**
- **Assessment milestones met (PART Measure)**
- **Risk management milestones met (PART Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: Annual milestones in support of the Multi-Year Plan for Endocrine Disruptors research are developed and revised during the annual budget and performance planning process. Self-assessments of progress toward completing these activities are based on the pre-defined goals.

QA/QC Procedures: Procedures are now in place to require that all annual milestones be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management.

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Endocrine Disruptors Multi-Year Plan, available at: http://www.epa.gov/osp/myp/edc.pdf
Endocrine Disruptors PART Program Review, available at: http://www.whitehouse.gov/omb/expectmore/summary/10002280.2004.html

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4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **Number of states using a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of national programs and policies (PART measure)**

Performance Database: Internal Regional EPA tracking system.

Data Source: Data are derived from internal assessments of state activities.

Methods, Assumptions and Suitability: Data for this measure are collected based on assessments of the number of states using Environmental Monitoring and Assessment Program (EMAP) data to monitor the condition of ecological resources. EMAP data are generated, in part, by a cooperative agreement with twenty-three states to conduct the National Coastal Assessment Monitoring survey, which introduces a standard protocol for monitoring the ecological condition of estuaries; including, probabilistic sampling designs, response designs for indicators, laboratory analyses, statistical analyses and reporting formats.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: EPA anticipates by 2007 all states will have adopted and implemented the National Coastal Assessment Monitoring survey. Improvements in the management of contracts, coordination of the shipment of samples, and distribution of resulting data are now performed by EPA to give states without capability the opportunity to partner with the agency.

References: EMAP data, available at: http://www.epa.gov/docs/emap/index.html
US EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan, 2001-2004. EPA/620/R-01/002. Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL.
Ecological Research PART Program Review, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2005.html

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of public health outcomes long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of mechanistic data long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the aggregate and cumulative risk long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support efficient and effective clean-ups and safe disposal of contamination wastes.**
- **Percentage of planned outputs delivered in support of water security initiatives**
- **Percentage of planned outputs delivered in support of risk assessors and decision-makers in the rapid assessment of risk and the determination of cleanup goals and procedures following contamination.**
- **Percentage of planned outputs delivered on time in support of establishment of the environmental National Laboratory Response Network**
- **Percentage of planned outputs delivered in support of HHRA health assessments. (PART Measure)**
- **Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents (PART Measure)**
- **Percentage of planned outputs delivered in support of HHRA Technical Support Documents (PART Measure)**
- **Percentage of planned outputs delivered. (PART Measure)**
- **Percent progress toward completion of a framework linking global change to air quality. (PART Measure)**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for causal diagnosis tools and methods to determine causes of ecological degradation and achieve positive environmental outcomes. (PART Measure)**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental forecasting tools and methods to forecast the ecological impacts of various actions and achieve positive environmental outcomes (PART Measure).**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services to achieve positive environmental outcomes (PART Measure).**
- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to prioritize testing requirements; enhance interpretation of data**

to improve human health and ecological risk assessments; and inform decision-making regarding high priority pesticides and toxic substances (PART Measure).

- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data for probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants (PART Measure).**
- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to make decisions related to products of biotechnology (PART Measure).**

Performance Database: Integrated Resources Management Systems (internal database) or other internal tracking system.

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of a program's long-term goals, each program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Multi-Year Plan, available at: http://epa.gov/osp/myp/hh.pdf.
Global Change Research Multi-Year Plan, available at: http://epa.gov/osp/myp/global.pdf

4-Year Performance Data
Annual Performance Goals and Measures

Human Health Risk Assessment Multi-Year Plan, available at: http://epa.gov/osp/myp/hhra.pdf
Safe Pesticides/Safe Products Multi-Year Plan, available at: http://epa.gov/osp/myp/sp2.pdf
Ecological Research Multi-Year Plan, available at: http://epa.gov/osp/myp/eco.pdf
Human Health Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html
Global Change Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004307.2006.html
Human Health Risk Assessment PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html

FY 2009 Performance Measures:

- **Percentage of Ecological Research publications rated as highly-cited publications (PART Measure).**
- **Percentage of Ecological Research publications in "high-impact" journals (PART Measure).**
- **Percentage of Human Health program publications rated as highly cited papers (PART Measure).**
- **Percentage of SP2 publications rated as highly cited publications (PART Measure).**
- **Percentage of SP2 publications in "high impact" journals (PART Measure).**

Performance Database: No internal tracking system.

Data Source: Searches of Thomson Scientific's *Web of Science* and *Scopus* are conducted to obtain "times cited" data for programs' publications. Analyses are completed using Thomson's *Essential Science Indicators (ESI)* and *Journal Citation Reports (JCR)* as benchmarks. *ESI* provides access to a unique and comprehensive compilation of essential science performance statistics and science trends data derived from Thomson's databases.

Methods, Assumptions and Suitability: For influence and impact measures, *ESI* employs both total citation counts by field and cites per paper scores. The former reveals gross influence while the latter shows weighted influence, also called impact. *JCR* is a recognized authority for evaluating journals. It presents quantifiable statistical data that provide a systematic, objective way to evaluate the world's leading journals and their impact and influence in the global research community. The two key measures used in this analysis to assess the journals in which a program's papers are published are the Impact Factor and Immediacy Index. The Impact Factor is a measure of the frequency with which the "average article" in a journal has been cited in a particular year. The Impact Factor helps evaluate a journal's relative importance, especially when compared to other journals in the same field.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Analyses do not capture citations within EPA regulations and other key agency documents.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Safe Pesticides/Safe Products Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/sp_bibliometric_1206.pdf
Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Ecological Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/eco_full_analysis.pdf
Bibliometric Analysis for the U.S. Environmental Protection Agency/ Office of Research and Development's Human Health Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/human_health_bibliometric_121306.html
Human Health Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html
EPA Ecological Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2007.html
EPA Pesticides and Toxics Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10009012.2007.html

FY 2009 Performance Measure:

- **Usefulness of HHRA's Air Quality Criteria Documents (AQCDs), represented by the number of days between the completion of AQCD peer review and publication of the EPA staff document that relies on the AQCD.**

Performance Database: N/A

Data Source: Data are generated based on internal tracking of the time between completion of AQCD peer review and publication of the EPA staff document.

Methods, Assumptions and Suitability: To provide an indication of the usefulness of HHRA's AQCDs, the program tracks the time between completion of AQCD peer review and publication of the EPA staff document. The program aims to complete peer review at least 60 days prior to publication of the draft Staff Paper for all AQCDs over the 5 year period 2006 - 2010. The goal is to achieve 100% coverage of Agency needs by 2010.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data derived from this measure serve as a proxy for determining the utility of HHRA's Air Quality Criteria Documents (AQCDs) for the EPA staff document.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Risk Assessment PART Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html

FY 2009 Performance Measure:

- **Average cost to produce Air Quality Criteria/Science Assessment documents (Efficiency Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-tracking of cost per Air Quality Criteria/ Science Assessment document.

Methods, Assumptions and Suitability: The HHRA Program's efficiency measure tracks the cost to produce AQCDs for use by the Office of Air and Radiation in developing their policy options for the NAAQS. Total FTE and extramural dollar costs are cumulated over a five year period and divided by the number of AQCDs produced in this time period, to create a moving annual average $/AQCD.
QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the program activities. However, other performance measures and independent program reviews are used to measure the quality and impact of the program.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Risk Assessment PART Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html

FY 2009 Performance Measure:

- **Average time (in days) to process research grant proposals from RFA closure to submittal to EPA's Grants Administration Division, while maintaining a credible and efficient competitive merit review system (as evaluated by external expert review) (Efficiency Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-tracking of grants processing time.

Methods, Assumptions and Suitability: The Human Health Program's efficiency measure tracks the average time to process and award grants.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the program activities. However, other performance measures and independent program reviews are used to measure the quality and impact of the program.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART Efficiency Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Global Change Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004307.2006.html

GOAL 5 OBJECTIVE 1

FY 2009 Performance Measures:

- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions [PART]**
- **Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated [PART]**
- **Percentage of concluded enforcement cases requiring implementation of improved environmental management practices [PART]**
- **Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded enforcement actions (i.e., injunctive relief and SEPs)**
- **Pounds of pollutants estimated to be reduced, treated, or eliminated as a result of audit agreements [PART]**

Performance Databases: The Integrated Compliance Information System Federal Enforcement & Compliance (ICIS FE&C) database tracks EPA judicial and administrative civil enforcement

actions. Criminal enforcement cases are tracked by the Criminal Case Report System (CCRS) which became operational in FY 2006.

Data Source: Most of the essential data on environmental results in ICIS FE&C is collected through the Case Conclusion Data Sheet (CCDS), which Agency staff begin preparing after the conclusion of each 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. Information from the CCDS is used to track progress for several of the performance measures. The CCDS form consists of 22 specific questions which, when completed, describe specifics of the case; the facility involved; 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 documents whether the defendant/respondent, in response to an order for injunctive relief or otherwise in response to the enforcement action, will: (1) implement controls that will reduce pollutants; and/or (2) improve environmental management practices to curtail, eliminate or better monitor and handle pollutants in the future.

The Criminal Enforcement Program also collects annual information on pollution reductions for concluded criminal prosecutions on a separate case conclusion data form.

Methods, Assumptions and Suitability: For enforcement actions which result in pollution reductions, staff estimate the amount of pollution reduced for an immediately implemented improvement, or for an average year once a long-term solution is in place. There are established procedures to be used by EPA staff to calculate, by statute, e.g., Clean Water Act (CWA), the pollutant reductions or eliminations. The calculation determines the difference between the current Aout of compliance@ quantity of pollutants released and the post enforcement action Ain compliance@ quantity of pollutants released. This difference is then converted into standard units of measure.

QA/QC Procedures: QA/QC procedures [See references] are in place for both the CCDS and ICIS FE&C data entry. There is a CCDS Training Booklet [See references] and a CCDS Quick Guide [See references], both of which have been updated and distributed throughout regional and headquarters= offices. The criminal enforcement program has prepared a companion guide for use by its field agents. Separate CCDS Calculation and Completion Checklists [See references] are required to be filled out when the CCDS is completed. Criminal enforcement measures are quality assured by the program at the end of the fiscal year.

Quality Management Plans (QMPs) are prepared for each office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance's (OC) QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008. To satisfy the Government Performance and

Results Act (GPRA), the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement, OECA instituted a requirement for semiannual executive certification of the overall accuracy of ICIS information. In addition, in FY 2003, OC established a quarterly data review process to ensure timely input, data accuracy, and reliability of EPA's enforcement and compliance information.

Data Quality Review: Information contained in the CCDS and ICIS FE&C are required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. ICIS data are quality-reviewed quarterly, and reviewed and certified at mid-year and end-of-year.

Data Limitations: Pollutant reductions or eliminations reported in CCDS are projected estimates of pollutants to be reduced or eliminated if the defendant carries out the requirements of the settlement. (Information on expected outcomes of state enforcement is not available.) The estimates are based on information available at the time a case is settled or an order is issued. In some instances, this information will be developed and entered after the settlement, during continued discussions over specific plans for compliance. Because of the time it takes to agree on compliance actions, there may be a delay in completing the CCDS. Additionally, because of unknowns at the time of settlement, different levels of technical proficiency, or the nature of a case, OECA=s expectation is that the overall amount of pollutants to be reduced or eliminated will be prudently underestimated based on CCDS information.

Error Estimate: Not available

New & Improved Data or Systems: In November 2000, EPA completed a comprehensive guide on the preparation of the CCDS estimates. This guide, issued to headquarters and regional staff, was made available in print and CD-ROM, was supplemented in FY 2002 and updated in FY 2004. The guide contains work examples to ensure better calculation of the amounts of pollutants reduced or eliminated through concluded enforcement actions.

ICIS FE&C became operational in June 2006. This new data system has all of the functionality of old ICIS (ICIS 1.0) but also has an added feature for tracking EPA enforcement and compliance activities. In addition, another component of ICIS, "ICIS-NPDES" is being phased-in as the database of record for the CWA National Pollutant Discharge Elimination System (NPDES) program and it includes all federal and state enforcement, compliance and permitting data. States are currently being migrated to ICIS NPDES from the legacy data system, the Permit Compliance System (PCS). States are being phased-in to ICIS-NPDES in accordance with their current data and system capabilities and the completed migration process is projected to be completed in FY2009. As a state's data is migrated from PCS to ICIS-NPDES, so too is its NPDES federal compliance and enforcement data. ICIS-NPDES will have a new feature that did not exist in the legacy system and that is the capability to accept electronic data directly from facilities. This new data reporting function is expected to increase data accuracy and timeliness.

4-Year Performance Data
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To date ICIS-NPDES has become the national system of record for 21 states, 2 tribes, and 9 territories.

References: Quality Assurance and Quality Control procedures: Data Quality: Life Cycle Management Guidance, (IRM Policy Manual 2100, dated September 28, 1994, reference Chapter 17 for Life Cycle Management). CCDS: CCDS, Training Booklet, issued November 2000; Quick Guide for CCDS, issued November 2000, and "Guide for Calculating Environmental Benefits of Enforcement Cases: FY2005 CCDS Update" issued August 2004 available: http://intranet.epa.gov/oeca/oc/resources/ccds/ccds.pdf. Information Quality Strategy and OC's Quality Management Plans: Final Enforcement and Compliance Data Quality Strategy, and Description of FY 2002 Data Quality Strategy Implementation Plan Projects, signed March 25, 2002. ICIS: U.S. EPA, OECA, ICIS Phase I, implemented June 2002. Internal EPA database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA). Criminal Enforcement Division Case Conclusion

FY 2009 Performance Measure:

- **Percentage of regulated entities taking complying actions as a result of on-site compliance inspections and evaluations**

Performance Databases: ICIS FE&C and manual reporting by regions.

Data Sources: EPA regional offices, Office of Civil Enforcement - Air Enforcement Division (Mobile Source program), Office of Compliance - Agriculture Division (Good Laboratory Practices), and the Compliance Assessment and Media Programs Division (Wood Heaters).

Methods, Assumptions and Suitability: The Inspection Conclusion Data Sheet, (ICDS) is used to record key activities and outcomes at facilities during on-site inspections and evaluations. Inspectors use the ICDS form while performing inspections or investigation to collect information on on-site complying actions taken by facilities, deficiencies observed, and compliance assistance provided. The information from the completed ICDS form is entered into ICIS or reported manually. This measure was selected because it directly counts the complying actions taken by the facility to address deficiencies communicated by the inspector during on-site inspections/evaluations. ICDS data can be used to identify trends and generate targeting strategies.

QA/QC Procedures: The ICIS FE&C data system has been developed per Office of Environmental Information 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.

4-Year Performance Data
Annual Performance Goals and Measures

Data Quality Review: The information in the CCDS, ICDS and ICIS FE&C is required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. In FY2003, to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information. ICIS FE&C data are reviewed quarterly and certified at mid-year and end of year.

Data Limitations: ICIS FE&C is the official database of record for all inspections not reported into the legacy data bases (with the exception of some regions participating in the Underground Injection Control (UIC) database pilot who must still report manually). Legacy databases still operational include Air Facility System (AFS), RCRAInfo, and PCS for those states not migrated over to ICIS-NPDES.

New & Improved Data or Systems: In June FY 2006, a new version of the ICIS data system, ICIS FE&C became operational. The new data system has all of the functionality of old ICIS (ICIS 1.0) but adds functionality for tracking EPA enforcement and compliance activities. Further, ICIS-NPDES is beginning to replace the PCS as the database of record for the NPDES program, including all federal and state enforcement, compliance and permitting data. States are being phased-in to ICIS-NPDES in accordance with their current data and system capabilities and the completed migration process is projected to be completed in FY 2009.

References:

- ICIS: U.S. EPA, OECA, ICIS FE&C, implemented June 2006
- ICIS: U.S. EPA, OECA, ICIS-NPDES, implemented June 2006
- Memo dated October 11, 2005: Entering Manually Reported Federal Inspections into ICIS in FY 2006
- Internal EPA database
- Non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA).

FY 2009 Performance Measures:

- **Percentage of regulated entities receiving direct compliance assistance from EPA reporting that they improved environmental management practices as a result of EPA assistance**
- **Percentage of regulated entities receiving direct assistance from EPA reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance**

Performance Database: EPA headquarters and regions will manage data on regulated entities receiving direct compliance assistance from EPA through ICIS.

4-Year Performance Data
Annual Performance Goals and Measures

Data source: Headquarters and EPA=s regional offices will enter information in ICIS upon completion and delivery of media and sector-specific compliance assistance including workshops, training, on-site visits and distribution of compliance assistance tools. ICIS 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.

Methods, Assumptions and Suitability: Compliance Assistance (CA) measures are automatically produced in the ICIS database which records the number of entities that received direct assistance from EPA and report that they improved an environmental management practice and/or report that they reduced, treated or eliminated pollution as a result of EPA assistance. The Compliance Assistance Conclusion Data Sheet (CACDS) was created to facilitate entry of data in ICIS on the on-site CA visits. ICIS produces the percentage by dividing the number of respondents to each of two follow-up survey questions by the number of respondents for each question who answered affirmatively. The figure is aggregated nationally from the regional data. A percentage measure was chosen to track the goal for year to year comparability as opposed to a direct number which varies year to year.

QA/QC: Automated data checks and data entry guidelines are in place for ICIS.

Data Quality Review: Information contained in the ICIS is reviewed by regional and headquarters staff for completeness and accuracy. In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement. ICIS data are reviewed quarterly and certified at mid-year and end of year.

Data Limitations: At the request of OMB, OECA has agreed to add language to caveat CA results in EPA's annual *Performance and Accountability Report*. The language will explain that our GPRA performance measures are not calculated from a representative sample of the regulated entity universe. The percentages are based, in part, on the number of regulated entities that answer affirmatively to questions on our voluntary surveys and do not account for the number of regulated entities who chose not to answer these questions or a survey.

Error Estimate: None

New & Improved Data or Systems: EPA continues to improve and/or modify elements of the compliance assistance module in ICIS based on use of the system. OECA will conduct a study and develop a strategy to use statistically valid techniques to tie outcomes to EPA-provided compliance assistance activities. Beginning with a pilot survey in FY 2008, EPA will conduct a survey every three years of a statistically-valid sample of compliance assistance recipients to measure behavior changes resulting from compliance assistance.

References: US EPA, ICIS Compliance Assistance Module, February 2004; US EPA, Compliance Assistance in the Integrated Compliance Information System Guidance, February 20, 2004. US EPA, 2005 Guidance Addendum for Reporting Compliance Assistance in the ICIS, March 2005.

GOAL 5 OBJECTIVE 2

FY 2009 Performance Measures:

- **Number of pounds of reduced (in millions) of priority chemicals as measured by National Partnership for Environmental Priorities members.**
- **Number of pounds of priority chemicals reduced from the environment per Federal government costs [PART efficiency measure]**

Performance Database: Under Information Collection Request no. 2050-0190 ("Reporting Requirements Under EPA's National Partnership for Environmental Priorities", renewed April 2006) the National Partnership for Environmental Priorities (NPEP) program collects information on partner (mostly from the industrial sector, and one municipal facility) priority chemical reduction commitments, technical solutions proposed to achieve reductions, and actual reduction achievements. Achievements are verified through discussions between EPA waste minimization national experts and partner technical personnel, and further verified using the Toxics Release Inventory system where possible.

NPEP efficiency measure: The denominator of the efficiency measure, or the cost to perform such actions, equals program cost minus quantifiable benefit per pound of reduction. Program cost is calculated to be the cost for Federal program implementation (FTE + grant and contract funding). Industry cost is neutral. Quantifiable benefits include information collected through NPEP success stories on resource savings (e.g. water, energy) resulting from implementation of waste minimization technologies and processes.

Data Source: As part of their partnership agreement, NPEP partners provide information concerning what priority list chemicals they commit to reduce, the process through which the reduction will be achieved, and the time frame for achieving the commitment. When the commitment is achieved they provide EPA with a "success story" which identifies the actual achievement, confirms the process used to achieve the reduction, and provides additional information of interest to the general public and other technical personnel concerning how the achievement was met. Information is reviewed by EPA waste minimization national experts for reasonableness based on best professional judgment. An internal tracking system is used to track pounds committed, achievement date, and actual achievement. NPEP partner achievement data is further verified against TRI reporting when the partner is a TRI regulated facility. The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), Section 313

(Toxics Release Inventory) and expanded by the Pollution Prevention Act of 1990 (40 CFR Part 13101; www.epa.gov/tri) requires that regulated facilities report facility-specific, chemical-specific release, waste and recycling data to EPA.

Methods and Assumptions: Regional targets are calculated to meet the national total goal. This is a new measure which does not have comparable historical data. EPA does not intend to reconcile FY 08 results with prior years.

Additionally, when the partner is also a TRI regulated facility, achievement data are verified against TRI reporting

Suitability: EPA waste minimization national experts are trained in industrial or chemical engineering and have significant experience in evaluating industrial processes for waste minimization potential and efficiency. Their professional judgment forms the basis for accepting the applicants' waste minimization commitment and achievement.

QA/QC Procedures:

Internal tracking: EPA engineers review commitment information. In cases where commitment information is initially incomplete or lacks substantiation, EPA engineers may conduct site visits in order to make a determination that the commitment is reasonably achievable. Information on number of pounds committed for reduction, achievement date and actual achievement is reported by NPEP partners and stored in an internal NPEP tracking system. Tracking system data are periodically reviewed by EPA regional coordinators to ensure that they accurately reflects partner commitments. Corrections are made to tracking system data when they are identified.

TRI Database verification: Most facilities use EPA-certified automated Toxics Release Inventory (TRI) Form R reporting tools, which contain automated error checking mechanisms. Upon receipt of the facilities' reports, EPA conducts automated edits, error checks, data scrubs, corrections and normalization during data entry and subsequent processing. 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:

Internal Tracking data: Tracking system data are periodically reviewed by EPA regional coordinators to ensure that they accurately reflects partner commitments. Corrections are made to tracking system data when they are identified.

TRI data: 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. Use of TRI Form R by submitters and EPA's data reviews help assure data quality. The GAO Report Environmental Protection: EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention (GAO - 01 – 283, February, 2002, http://www.gao.gov/new.items/d01283.pdf), recommends that EPA strengthen the rule on reporting of source reduction activities. Although EPA agrees that source reduction data are valuable, the Agency has not finalized regulations to improve reporting of source reduction activities by TRI-regulated facilities.

Data Limitations: For both internal tracking system and TRI data, 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.

Error Estimate:

Internal Tracking: This is a new measurement tool, implemented with the 2006 – 2011 Strategic Plan. No error estimate is available at this time. However, EPA is developing an error tracking process for use in 2007 and should have an error estimate for fiscal year 2007 in early 2008.

TRI data: From the various data quality efforts, EPA has learned of several reporting issues such as incorrect assignment of threshold activities and incorrect assignment of release and other waste management quantities (EPA-745-F-93-001; EPA-745-R-98-012; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm.). For example, certain facilities incorrectly assigned a 'processing' (25,000 lb) threshold instead of an 'otherwise use' (10,000 lb) threshold for certain non-persistent, bioaccumulative and toxic (PBT) chemicals, so they did not have to report if their releases were below 25,000 lbs. Also, for example, some facilities incorrectly reported fugitive releases instead of stack releases of certain toxic chemicals.

New/Improved Data or Systems: Use of internal tracking data allows EPA to measure direct progress resulting from the NPEP program. Historically EPA has measured trends using TRI. Because TRI data are influenced by a variety of factors, including multiple EPA and State regulations, voluntary programs, and national economic trends, use of TRI did not allow EPA to directly measure program results. The internal tracking system is a limited data set and is 100% reviewed by expert engineers, is a reasonably accurate data set.

References: http://www.epa.gov/epaoswer/hazwaste/minimize/index.htm; www.epa.gov/tri/ and additional citations provided above. (EPA-745-F-93-001;EPA-745-R-98-012;http://www.epa.gov/tri/report/index.htm; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm Bureau of Economic Analysis (BEA) indices are available at http://www.bea.gov/bea/regional/gsp/.

FY 2009 Performance Measures:

- **Pounds of hazardous materials reduced by P2 program participants (PART measure)**
- **BTUs of energy reduced, conserved or offset by P2 program participants**
- **Gallons of water reduced by P2 program participants**
- **Business, institutional and government cost reduced by P2 program participants (PART measure)**

The Agency's Pollution Prevention programs, or results centers, include Green Chemistry (GC), Design for the Environment (DfE), Green Engineering (GE), Regional Offices Pollution Prevention Resource Exchange (P2Rx), Environmentally Preferable Purchasing (EPP), Partnership for Sustainable Healthcare (PSH), and Green Suppliers Network (GSN). Each of these program/results centers operate under the principles of the Pollution Prevention Act and works with others to reduce waste at the source, before it is generated. The programs are designed to facilitate the incorporation of pollution prevention concepts and principles into the daily operations of government agencies, businesses, manufacturers, nonprofit organizations, and individuals. Each program/results center contributes outcome results which are added to the combined flow of results. Data is rolled up into a single tracking tool: "P2 Program 2011 Strategic Targets -Contributions by Program.xls," aggregating annual progress toward the goals.

Performance Database:
Green Chemistry (GC): EPA has developed an electronic metrics database ("matrix") that allows organized storage and retrieval of green chemistry data submitted to EPA on alternative feedstocks, processes, and safer chemicals. The database was designed to store and retrieve, in a systematic fashion, information on the environmental benefits and, where available, economic benefits that these alternative green chemistry technologies offer. The database was also designed to track the quantity of hazardous chemicals and solvents eliminated as well as water and energy saved through implementation of these alternative technologies. Green chemistry technology nominations are received up to December 31 of the year preceding the reporting year, and it normally takes 6-12 months to enter new technologies into the database. The database currently has information on all technologies received through 2007.

Design for the Environment (DfE): DfE has an evaluation spreadsheet that is populated for all its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, and a collaboration with the Air Office on DfE approaches as implementation mechanisms for regulating Local Area Sources, such as Auto Refinishing). Spreadsheet content varies by project, and generally includes measures comparing baseline technologies or products to safer ones, as well as information on partner adoption and/or market share of safer alternatives. For example, the DfE Formulator Program tracks the move to

safer chemicals (such as pounds of chemicals of concern no longer used by partners, and conversely pounds of safer ingredients), and reductions in water and energy use, where available.

Green Engineering (GE): GE will be developing an electronic database to keep track of environmental benefits of GE projects including pounds of hazardous chemicals prevented and/or eliminated, gallons of water, British Thermal Units (BTUs) and dollars saved and pounds of carbon dioxide (CO_2) emissions eliminated.

Regional Offices: EPA's Regional Offices' (Regions) P2 results come primarily through grants they award, and results from projects managed by EPA Regional staff. Regional Offices use the GranTrack database to collect and organize information on the P2 and Source Reduction grants they award. GranTrack includes multiple information fields covering administrative and financial aspects of the grants as well as results reported by grantees. The database can be searched and reports developed in numerous ways, including by Region, type of grant, year grant awarded, and year of results. Data may be displayed for individual grants or in aggregate covering multiple grants. While GranTrack has been used for a number of years it has some limitations. This year the program is exploring options for upgrading GranTrack and/or using additional tools to simplify and improve results reporting.

Pollution Prevention Resource Exchange (P2Rx): There are 8 regional P2 Information centers which coordinate and supply information, training and conferences for local and state technical assistance providers as well as businesses. These centers report to EPA through grant reports. These 8 P2Rx centers also host regional modules that contribute to the National P2 Results system that was developed under a grant from the EPA National Environmental Information Exchange Network (NEIEN) program. Any program can enter measures of outputs and outcomes into this data system. Over 30 state-level P2 organizations have signed Memoranda of Agreements to provide data. The P2Rx centers have trained and assisted organizations in entering their data. EPA is conducting an evaluation of P2Rx services to estimate the portion of potential customers these centers reach. EPA support of these regional centers and the technical assistance, publications, training, and information supplied by the P2Rx centers contributes to national P2 progress. To capture this indirect effect of EPA's role, 10% of the results reported through the P2Rx center will be counted in EPA performance measures.

Partnership for Sustainable Healthcare (PSH) Program: The Partnership for Sustainable Healthcare (PSH) program is the new name for EPA's continued effort with the health care sector, as the former "Hospitals for a Healthy Environment" (H2E) program (now the H2E organization has become a fully independent non-profit organization.). PSH works, in collaboration with the National Center for Manufacturing Sciences (NCMS), and H2E, as NCMS' sub-grantee, in providing technical assistance to the health care sector. H2E maintains its own electronic program database. Data are collected voluntarily from Partners on an ongoing and continuous basis. For pounds of hazardous materials, data are requested on mercury and

broken down by types of waste. Information on BTUs, gallons of water, and dollar savings are only requested in award applications.

Green Suppliers Network (GSN): GSN utilizes a Customer Relationship Management database (CRM) in partnership with the National Institute of Standards and Technology's Manufacturing Extension Partnership Program (NIST MEP) to collect performance metrics for the program. The CRM was originally configured to collect economic information from companies receiving services through the NIST MEP system. The CRM has been modified to capture the environmental metrics collected during a GSN review at a company, such as the value of environmental impact savings identified, energy and water conserved, water pollution reduced, air emissions reduced, hazardous waste reduced (lbs/year), and toxic/hazardous chemical use reduced (lbs/year).

Environmentally Preferable Products (EPP): Results for Environmentally Preferable Purchasing (EPP) come from the Federal Electronics Challenge (FEC), the Electronic Product Environmental Assessment Tool (EPEAT), and Green Janitorial Products. FEC uses the FEC Administrative Database for storage and retrieval of annual reporting information from FEC partners. EPP staff run these reporting data through the Electronics Environmental Benefits Calculator to calculate pounds of hazardous pollution reduced, units of energy conserved, and costs saved (among other benefits) on an annual basis. EPEAT-registered manufacturers provide reporting data via the Green Electronics Council, which collects and organizes EPEAT reporting data. As with FEC, the EPP team runs these reporting data through the Electronics Environmental Benefits Calculator to calculate pounds of hazardous pollution reduced, units of energy conserved, and costs saved (among other benefits) on an annual basis. For Janitorial Products, the EPP team will collect annual reporting data from various EPA contacts for EPA's Environmental Management System (EMS), and then run these data through the Green Cleaning Calculator to calculate pounds of hazardous pollution reduced. FY 2007 data will be collected in January 2008.

Data Sources: *GC:* Industry and academia submit nominations annually to the Office of Pollution Prevention and Toxics (OPPT) in response to the annual Presidential Green Chemistry Challenge Awards. Environmental and economic benefit information is included in the nomination packages. Qualitative and quantitative benefit information is pulled from the nominations and entered in the metrics database. The metrics database pulls this public benefit information from the nominations. The database currently has information on all technologies nominated through 2007.

DfE: The source of DfE's evaluation information varies by the project and the partner industry. For example, in DfE's Formulator Recognition Program, partners provide proprietary information on the production volume of their improved formulations. For other partnerships, data sources typically include technical studies (e.g., Alternatives Assessments and Life-Cycle Assessments) and market/sales/adoption information from sources such as industry associations.

GE: Data come from sources and partners including the regions, academia and industry. For example, for GE projects related to the pharmaceutical industry, data will be directly reported by the project leaders. Some information may also come from profiles of recognized projects taken from technical journals or organizations, such as the American Institute of Chemical Engineers, or directly reported by project leaders on industry projects or joint academia-industry projects.

Regional Offices: P2 Grant and Source Reduction grant data are secured from grant applications, grant reports and supplemental forms and entered into the current P2 Grant Database, Gran Track. In addition, over the coming year the program is piloting the use of a new tool to assist grantees in projecting and determining grants results and to assist regional project officers in compiling and analyzing those results.

P2Rx: P2Rx center data are currently secured through the National P2 Results system, compiled through 8 Regional modules. In the future, more targeted results could be secured through web-based surveys of customers, pre and post testing of training attendees and case studies following long term impact of the use of P2Rx services and information.

PSH: Because the PSH program is a voluntary program, the information collected is voluntarily submitted by hospital Partners. The PSH program maintains an ICR for the collection of data which allows EPA to collect data from third parties under the Paperwork Reduction Act.

GSN: Data are collected by the GSN Review Team during a GSN review at the company's facility. This team consists of a "lean" manufacturing expert from the NIST MEP system and an environmental expert usually from the state environmental agency or its designee. Lean manufacturing is a business model and collection of methods that help eliminate waste while delivering quality products on time and at least cost. NIST MEP has a system of lean experts who assist businesses through the process of becoming more efficient and cost effective. The metrics are recorded in the final report generated for the company's use and also are entered into the CRM database by the NIST MEP center. All MEP centers are grantees to the Department of Commerce and must adhere to DOC's requirements for the collection and handling of data. These requirements are reinforced by the terms of the "Request for Proposals" to which each center (e.g., grantee) responds and which must be followed during a GSN review.

EPP: For FEC, the data source is federal partners. For EPEAT, the data source is EPEAT-registered manufacturers of electronic products. For Janitorial Products, the data source is EPA EMS contacts for procuring janitorial products.

Methods and Assumptions: *GC:* The public information is tracked directly through internal record-keeping systems. Annual benefits are assumed to reoccur. The performance data, while collected by individual centers, is acceptable for the purpose of performance measurement for

the program, as it addresses the specific measures and reflects an aggregated and quality reviewed dataset.

DfE: Each DfE partnership identifies and focuses on a unique set of chemicals and industrial processes. For DfE's Formulator Recognition Program, partner-provided data on production volumes is aggregated to determine the total reductions of hazardous chemicals achieved through the program. For Lead-Free Solder and Furniture Flame Retardants, market data for the production volume of the chemical of concern provides the measure for reduction. DfE's Data Program Tracking Spreadsheet includes the methods/assumptions for each project's measures.

GE: The information will be supplied directly by project leaders and/or academic-industry-region partners. The information will be tracked directly through EPA record keeping systems. GE's Data Program Tracking spreadsheet includes methods and assumptions.

Regional Offices: The data will come from state and other P2 grantees and other sources as described above. No models or assumptions or statistical methods are employed by EPA. The program is developing a new data collection tool (methodology) for grantees that is designed to increase the consistency of their data collection methods and to offer a consistent set of costing assumptions.

P2Rx: Data reported by state and local programs in the National P2 Results system will be collected and compiled by the regional centers. Some portion of these results, based on an evaluation of the portion of the customer base reached by the center in each region, will be attributed to the P2Rx center for that region. The ability to attribute environmental outcomes to Web-based information and training will rely on customer survey information and Web site user statistics.

PSH: The data comes directly from program Partners, specifically hospitals. No models or assumptions or statistical methods are employed.

GSN: The data are aggregated by NIST MEP headquarters and reported to EPA on a quarterly basis in September, December, March, and June. The data are aggregated to maintain confidentiality for all companies participating in the program. No models or statistical methods are employed.

EPP: For FEC, the program assumes that partners report accurate data. The assumptions needed for the Calculator to translate environmental attributes and activities into environmental benefits are relatively extensive and are laid out in the Calculator's inputs (e.g., the average lifecycle of a computer, the weight of packaging for a computer, etc.). The assumptions were reviewed when the Calculator underwent the peer review process. The Electronics Environmental Benefits Calculator assists institutional purchasers in: 1) measuring the environmental and economic benefits of purchasing environmentally preferable electronics; 2)

enabling energy efficiency features on electronics during use; 3) extending the useful life of electronics; and 4) disposing of old electronics in an environmentally sound manner through reuse or recycling. For Janitorial Products, the method involves reporting the types of products and work practices used during routine cleaning activities in office buildings. The Green Cleaning Calculator assists in calculating pounds of hazardous pollution reduced.

Suitability: Hazardous pounds reduced, dollars saved, BTUs of energy reduced conserved or offset, and gallons of water reduced represent the four Pollution Prevention measures. These annual measures have corresponding long term goals identified in EPA's 2006-2011 strategic plan and are suitable for year to year comparisons due to the program's ability to show annual progress towards reaching these long term goals.

QA/QC Procedures: All Pollution Prevention and Toxics programs operate under the Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines, as well as under the Pollution Prevention and Toxics Quality Management Plan (QMP) ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003), and the programs will ensure that those standards and procedures are applied to this effort. The Quality Management Plan is for internal use only.

GC: Data undergo a technical screening review by the Agency before being uploaded to the database to determine if the data adequately support the environmental benefits described in the Green Chemistry Challenge Awards application. Subsequent to Agency screening, nominations are reviewed by an external independent panel of technical experts from academia, industry, government, and nongovernmental organizations (NGOs). Their comments on potential benefits are incorporated into the database. The panel is convened by the Green Chemistry Institute of the American Chemical Society, primarily for judging nominations submitted to the Presidential Green Chemistry Challenge Awards Program and selecting winning technologies. Quantitative benefits are periodically reviewed to be sure they were accurately captured from the nominations.

DfE: Data undergo a technical screening review by DfE before being added to the spreadsheet. DfE determines whether data submitted adequately support the environmental benefits described.

GE: Data will be reviewed by the partners including industry, academia, and the regions. Data will also be reviewed by GE to ensure transparency, reasonableness and accuracy.

Regional Offices: Data will undergo technical screening review by EPA Regional and Headquarters staff and their contractor before being placed into GranTrack. Data for projects managed directly by EPA Regional staff will be reviewed by Regional personnel. Additional QA/QC steps to be developed, as appropriate. The program has been working with the regional offices this past year to develop consistent QA procedures, which can be applied at the beginning of the grant and throughout the life of the grant.

P2Rx: Data entered into the National P2 Results system will undergo technical screening review by P2Rx centers and EPA regional and Headquarters staff.

PSH: Data undergo technical screening review by the grantee (National Center for Manufacturing Sciences, which administers the program through a cooperative agreement) before being placed in the database. QA/QC plan is a part of the requirement of the cooperative agreement.

GSN: Data are collected and verified under NIST MEP's QA/QC plan. Each NIST MEP Center must follow QA/QC requirements as grantees to the Department of Commerce. Additionally, the environmental data are collected under the specific requirements of the state environmental agency participating in each GSN review. Each state agency utilizes their own QA/QC plan for data collection because they utilize the data for purposes in addition to the GSN program.

EPP:. Regarding FEC, EPEAT, and Janitorial Products, the calculators of environmental benefits (e.g., the Electronics Environmental Benefits Calculator and the Green Cleaning Calculator) underwent internal and external review during their development phases. Regarding FEC and EPEAT, instructions and guidelines are provided to partners on how to report data. Reporting forms are reviewed by EPA management when they are submitted. For EPEAT, EPEAT-registered manufacturers sign a Memorandum of Understanding in which they warrant the accuracy of the data they provide. For Janitorial Products, contractors sign a contract stating that they are providing janitorial products according to certain specifications. For FEC, EPEAT, and Janitorial Products, data undergo an internal technical review before these data are run through the calculators.

Data Quality Review: All Office of Pollution Prevention and Toxics (OPPT) programs operate under EPA's Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines and under the OPPT's Quality Management Plan (QMP).

GC: Review of industry and academic data as documented in U.S. EPA, Office of Pollution Prevention and Toxics, Green Chemistry Program. Files available at http://www.epa.gov/opptintr/greenchemistry/

DfE: Data collected includes those from industry associations and government reports. Source data is compared with industry trends and examined by industry and NGO partners.

GE: Data collected will be reviewed to meet data quality requirements.

Regional Offices: The GranTrack metrics and data system incorporate ideas and system features from the National Pollution Prevention Results System, developed with EPA support by such organizations as the Northeast Waste Management Officials Association, Pacific Northwest Pollution Prevention Resource Center, and National Pollution Prevention Roundtable. Data for projects managed directly by EPA Regional staff will be reviewed by Regional personnel. Data will undergo technical screening review by EPA Regional and Headquarters staff and their contractor before being placed into GranTrack. The P2 program has been working with the regional offices this past year to develop consistent QA procedures which can be applied at the beginning of the grant and throughout the life of the grant.

P2Rx: The new metrics and data system were based, in part, on recommendations in the February 2001 GAO report, "EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention" (GAO-01-283). They also incorporate work by such organizations as the Northeast Waste Management Officials Association, Pacific Northwest Pollution Prevention Resource Center, and National Pollution Prevention Roundtable.

PSH: Not applicable

GSN: Not applicable.

EPP: For FEC, data are entered on-line with an additional error-checking function on the online form. FEC staff also review the data to ensure that it is sensible, given the context. The mechanism by which the EPP program is receiving data from the Green Electronics Council is still being determined. For Janitorial Products, data quality review steps (as of 4th quarter 2006) are still under development.

Data Limitations:

GC: Nominations sometimes omit data for a given technology due to confidential business information. Nominations for the Presidential Green Chemistry Challenge Awards Program are in the public domain.. Because the Presidential Green Chemistry Challenge is a voluntary public program, it cannot routinely accept or process CBI. If the program stakeholders cannot verify a technology because of proprietary information, especially during the final judging stage of the awards program, they can and do ask EPA to conduct the verification internally. EPA will then ask the company to share confidential information with CBI-cleared OPPT staff in order for EPA to conduct the verification. It also is occasionally unclear as to what is the percentage market penetration of implemented alternative green chemistry technology (potential benefits vs. realized benefits). In these cases, the database is so noted.

DfE: Occasionally, data on innovative chemistries or technologies are claimed CBI by the developing company, thus limiting the implementation of beneficial pollution prevention practices on a wider scale.

GE: There may be instances in which environment benefits are not clearly quantified and/or available due to various reasons including CBI. In those instances, the data have to be carefully evaluated and considered for reporting. If the information is included, the uncertainties/limitations will be noted

Regional Offices: Limitations arise from the reliance on individual state and other P2 grantees and other sources to gather data. These programs vary in attention to data collection from sources within their jurisdictions, data verification and other QA/QC procedures. Also, despite changes described below to add consistent metrics and definitions, some differences exist. EPA is attempting to address these concerns by strengthening reporting requirements in its P2 grants, focusing on outcomes, and standardizing GranTrack metrics with those in the National P2 Results System. EPA is also in the process of adding a P2 component to the EPA Information Exchange Network (which provides financial support and a comprehensive data system to link state data with EPA). In addition, the program is working this year on developing and integrating new tools to assist grantees in projecting and determining results and to assist project officers in interpreting and reporting those results.

P2Rx: Limitations arise from variability in individual state and local P2 programs and their reporting sources, QA/QC procedures, and what is reported. Differences may arise in how programs quantify environmental benefits, based on state or local legislative requirements.

PSH: Not all hospital Partners have turned in their facility assessment information. However, in order to be considered for an award under the program, hospital Partner MUST submit facility information; therefore, the program has a very complete set of information for hospital Partners who have applied for awards. This introduces self-selection bias to the reported data as the hospitals with the best track records are those that apply for the awards. The program has roughly 10% of all Partner facilities' assessment data. An internal assessment conducted of data collected from Partners revealed some calculation errors and data inconsistencies regarding how waste data is captured by the hospital Partners. The program has gone back to correct some of those errors.

GSN: Limitations arise from the reliance on individual programs to gather data. These programs vary in attention to data collection from sources within their jurisdictions, data verification and other QA/QC procedures. The GSN program has attempted to address these concerns by strengthening the data collection requirements in the Request for Proposals that MEP centers must be respond to in order to perform a GSN review.

EPP: FEC and EPEAT have a built-in reliance on partners for data reporting.

Error Estimate:

GE: There may be instances in which environmental benefits are not clearly quantified. In those instances, the data will be excluded.

DfE: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

P2Rx: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

Regional Offices: Any errors detected during internal technical review of performance data submitted would be addressed, either through correction of data or elimination of data.

PSH: The program does not use a statistical approach to collect the data and therefore does not have confidence intervals for the performance estimates.

GSN: Not applicable.

GC: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

EPP: Any errors detected during internal technical review of performance data submitted would be addressed, either through correction of data or elimination of data.

New/Improved Data or Systems:

Regional Offices: EPA recently updated and expanded GranTrack, both to improve usability and to add a much greater level of detail regarding results reported by grantees. In regard to reporting of results, GranTrack includes activity measures, behavioral measures, and outcome measures. The metrics chosen and their definitions generally are consistent with those used in the National Pollution Prevention Results System, described in the P2Rx center. Also, EPA is planning to grant the public restricted access to GranTrack. The following fields will be accessible: general information, projects and results data, status of grant, funding, keywords, partners, and sectors. The program's system for estimating and reporting results will undergo further change and improvement this coming year. We anticipate working to improve the process of projecting and reporting results through the development of new tools and methodologies. We anticipate that these changes will simplify results reporting for grantees and will improve the credibility and predictability of those results.

P2Rx: This center's survey and data collection systems are under initial implementation. Improvements will be based on the outcome of the pending evaluation

PSH: The H2E organization is in the process of commercializing a new facility assessment software which will help hospital Partners collect and compute facility environmental improvement data. The software automatically converts units and tabulates information from the hospital's source data, as well as calculating costs for different waste streams. Anticipated roll-out for the software will be in 2008. The H2E organization has agreed to share the consolidated information with EPA when data collection begins.

References:

GC: http://www.epa.gov/opptintr/greenchemistry/
DfE: http://www.epa.gov/opptintr/dfe/
GE: http://www.epa.gov/opptintr/greenengineering/
P2 Programs: http://www.epa.gov/oppt/p2home/index.htm
http://www.p2.org/workgroup/Background.cfm
http://www.epa.gov/Networkg/
PSH: http://www.epa.gov/p2/pubs/psh.htm
GSN: www.greensuppliers.gov
EPP: Information about FEC's annual reporting is on the FEC web site at:
http://www.federalelectronicschallenge.net/report.htm
Information about the Electronics Environmental Benefit Calculator is on the FEC web site at:
http://www.federalelectronicschallenge.net/resources/bencalc.htm
The EPEAT Subscriber and License Agreement is available on the EPEAT web site at: http://www.epeat.net/docs/Agreement.pdf
Regional*:* *http://www.epa.gov/p2/pubs/local.htm*

FY 2009 Performance Measure:

- **Percent change from baseline in reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program [PART efficiency measure]**

EPA measures the accomplishments of the Design for the Environment (DfE) Program by comparing reductions in hazardous chemicals achieved to program resources, including FTE, overhead and extramural dollars spent.

Performance Database: The DfE program has an evaluation spreadsheet that is populated for all its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, and a collaboration with the Office of Air and Radiation

on DfE approaches for regulating Local Area Sources, such as Auto Refinishing). Key data elements used to calculate the efficiency measure are the quantity of hazardous chemicals reduced and spending information obtained from the OPPT Finance Central database. The efficiency measure numerator is the total pounds of hazardous chemicals reduced and the denominator is the annual DfE program resources expended.

Data Source: The source of DfE's evaluation information varies by the project and the partner industry. For example, in DfE's Formulator Recognition Program, partners provide proprietary information on the production volume of their improved formulations. For other partnerships, data sources typically include technical studies (e.g., Alternatives Assessments and Life-Cycle Assessments) and market/sales/adoption information from sources such as industry associations. Resource data are from OPPT Finance Central

Methods, Assumptions: Each DfE partnership identifies and focuses on a unique set of chemicals and industrial processes. For DfE's Formulator Recognition Program, partner-provided data on production volumes are aggregated to determine the total reductions of hazardous chemicals achieved through the program. For Lead-Free Solder and Furniture Flame Retardants, market data for the production volume of the chemical of concern provide the measure for reduction. DfE's Data Program Tracking Spreadsheet includes the methods/assumptions for each project's measures. Program resources are calculated directly from EPA figures. The efficiency measure corresponds directly to the program goal of cost-effectively reducing hazardous chemical use and can compare cost effectiveness year–to-year.

Suitability: Hazardous pounds reduced is one of four Pollution Prevention annual measures which have corresponding long term goals identified in EPA's 2006-2011 Strategic Plan and are suitable for year to year comparisons due to the program's ability to show annual progress towards reaching the long term goals. The indicators used for this measure are suitable because reductions in cost per pound of hazardous chemicals reduced are expected to result from improvements in program implementation. These cost reductions will enable EPA to achieve the goals of the Design for the Environment program with greater efficiency.

QA/QC Procedures: Design for the Environment operates under EPA's Information Quality Guidelines as found at http://www.epa.gov/oei/qualityguidelines/index.html and under the OPPT Quality Management Plan.

Data Quality Reviews: Data undergo a technical screening review by DfE staff before being added to the program tracking spreadsheet.

Data Limitations: The data submitted voluntarily by partners are confidential. The information made public information is limited to aggregated values.

Error Estimate: Due to the sampling methodology, no error estimate is possible.

New/Improved Data or Systems: Each year additional data are added to the program tracking spreadsheet and averaged with preceding years. Cumulative data will provide a more stable estimate of total pounds of hazardous chemicals reduced through the DfE program.

References:
http://www.epa.gov/oei/qualityguidelines/index.html

The DfE Program Tracking Spreadsheet contains Confidential Business Information.

FY 2009 Performance Measures:

- **Reduce water use at Performance Track facilities**
- **Reduce hazardous materials use at Performance Track facilities**
- **Reduce production of greenhouse gases at Performance Track facilities**
- **Reduce toxic releases to water at Performance Track facilities**
- **Reduce combined NOx, SOx, VOC and PM emissions at Performance Track facilities**

Performance Databases: In 2003, EPA developed an electronic database, Performance Track On-Line (a Domino database) which facilities use to electronically submit their environmental performance data. The data are stored in Performance Track Online as well as in the Performance Track Members Database (a Microsoft Access database).

Members report on results in a calendar year. Fiscal year 2009 data represents members' calendar year 2008 performance. That data will be reported to the Performance Track program by April 1, 2009. The data will then be reviewed, aggregated, and available for external reporting in September 2009. (Calendar year 2009 data will become available in September 2008.)

Data Source: All data are self-reported and self-certified by member facilities. As described below, Performance Track engages in quality control to the extent possible, but it does not conduct formal auditing. However, as described below, Performance Track staff visit up to 10% of Performance Track member facilities each year. In addition, a criterion of Performance Track membership is the existence of an environmental management system (EMS) at the facility, a key element of which is a system of measurement and monitoring. Performance Track facilities are required to have independent audits of their EMSs, which create a basis for confidence in the facilities' data.

Methods, Assumptions, and Suitability: Data collected from members' applications and annual performance reports are compiled and aggregated for the externally-reported indicators. Performance Track members commit to two to four environmental improvements, selected from

a comprehensive list of environmental indicators. Facilities then report on their performance in these indicators over a three-year period of participation. Because facilities choose the areas in which they will report, the externally reported indicators (listed above) may or may not be included in any particular facility's set of reported indicators. If a facility does not include one or more of the above indicators as one of its goals, then its performance for that indicator, either positive or negative, will not be included in EPA's aggregated data for the indicator.

The data reflect the performance results across the entire facility, and are thus considered "facility-wide" improvements. Members are not permitted to report on environmental improvements for a subset of the facility; rather, the data reported must represent the performance for the given indicator across the entire facility. Performance Track staff ensures that all improvements are facility-wide by conducting a thorough technical review of the submitted performance data. Any data that are determined to not reflect the entire facility's performance is either revised or excluded from the aggregated and externally reported results. EPA believes that this review process minimizes instances of reporting on non-facility wide improvements.

The data are normalized for production rates or other rates of output at the facilities. Normalized results take into account production or output changes at facilities.

The data can be used to make year-to-year comparisons, but reviewers and analysts should bear in mind that Performance Track membership is constantly in flux. Although members should retain the same set of indicators for their three-year participation period, as new members join the program and others leave, the group of facilities reporting on each indicator constantly changes. In a few instances, members make replacement goals due to closure of certain product lines or other major business changes.

Due to unavoidable issues regarding the timing of the application period, a small subset of reported data will represent performance improvements over two years for the facilities' first reporting year.

Reductions in greenhouse gas emissions are estimated based on facilities' reductions in energy use. To estimate greenhouse gas emissions from energy use, Performance Track uses EPA's Power Profiler tool (http://www.epa.gov/solar/powerprofiler.htm), which uses emission factors from the EPA database Emissions & Generation Resource Integrated Database (eGRID).

QA/QC Procedures: Performance data submitted to the program are reviewed for completeness and adherence to program requirements, and undergo a technical screening review by EPA and contractor staff. The quality of the data, however, is dependent on the quality of the measurement or estimation at the facility level. In cases where it appears possible that data is miscalculated or misreported, EPA or contractor staff contact the facility and request resubmittal of the data. If the accuracy of data remains under question or if a facility has provided

incomplete or non-standard data, the database is coded to ensure that the data is excluded from aggregated and externally reported results.

As described, Performance Track is quality controlled to the extent possible, but is not audited in a formal way. However, Performance Track staff visit up to 10% of Performance Track member facilities each year. During those visits, facilities are asked about their data collection systems and about the sources of the data reported to the program. Additionally, a prerequisite of Performance Track membership is an environmental management system (EMS) at the facility, a key element of which is a system of measurement and monitoring. Performance Track facilities are required to have independent audits of their EMSs, which increases confidence in the facilities' data. The independent assessment became a requirement in 2004.

Data Quality Reviews: N/A.

Data Limitations: Potential sources of error include miscalculations, faulty data collection, misreporting, and nonstandard reporting on the part of the facility. It is clear from submitted reports that some facilities estimate or round data. Also, errors are made in converting units and in calculations. As mentioned above, in cases where EPA identifies the possibility for these types of errors, the facility is asked to resubmit the data. In general, EPA is confident that the externally reported results are a fair representation of members' performance.

Error Estimate: Not calculated.

New/Improved Performance Data or Systems: Since spring 2004, all Performance Track applications and annual performance reports have been submitted electronically (through the Performance Track On-Line system), thus avoiding the need for manual data entry. This has also allowed for improved standardization of data collection. Additionally, the program has implemented a new requirement that all members receive an independent assessment of their EMSs prior to membership. Lastly, the program has reduced the chances that data may not reflect facility-wide data by addressing the issue in the review process and by instituting "facility-wide data" requirements for all indicators.

References: Members' applications and annual performance reports can be found on the Performance Track website at https://yosemite.epa.gov/opei/ptrack.nsf/faMembers?readform. *Performance Track On-Line* and the *Performance Track Members Database* are not generally accessible. Performance Track staff can grant access to and review of the databases by request.

4-Year Performance Data
Annual Performance Goals and Measures

FY 2009 Performance Measure:

- **75% of innovation projects under the State Innovation Grant Program and other piloting mechanisms will achieve, on average, 8.0% or greater improvement in environmental results from a project initiation baseline measure for the sectors and facilities (e.g., reductions in air or water discharges, improvements in ambient water or air quality, or improvements in compliance rates) or a 5% or greater improvement in cost-effectiveness and efficiency. In FY09, six (6) projects will be reaching completion, at which point they are evaluated, and the target is for four (4) to meet the performance goal.**

Performance Databases: The Office of Environmental Policy Innovation (OEPI) maintains an EPA-internal database, the "State Innovation Grant Database" (a Lotus Notes - Domino database) to retain and organize data on competition, award and project performance for its State Innovation Grant Program. The data base is managed by OPEI and access within the Agency can be granted to EPA project officers and program officials. In the past, we have granted access to this database to the Office of the Inspector General for use in a program evaluation. Data entry is performed by staff within OEPI. Within the sections on project performance, the database includes all available quarterly project progress reports and final project reports. Quarterly reports are timed to the lifecycle of an individual project rather than all projects on a fixed date. These reports include document in MS Word and WordPerfect formats as well as spreadsheets, all generated by the State Grant recipients to track their project milestones identified in the final project work plan. Beginning in 2007, OPEI began using the data to generate a regular performance report for the State Innovation Grant program. The projects funded by the grant program typically have a 2-4 year lifetime and during that period, each project reports on a quarterly basis and provides a final project outcome report at the termination of the project.

Projects implemented under the State Innovation Grant Program typically do not show measurable environmental outcomes until the programs initiated under the grants are fully implemented. For example, a State implementing an Environmental Results Program for a particular business sector may take up to three years to develop the compliance assistance program and operator manuals, conduct a baseline assessment of performance, implement the compliance assistance workshops, provide adequate time for businesses to fully adopt the program and then conduct a performance assessment for a statistical sample of hundreds of facilities state-wide. Dates captured in the project quarterly reports provide information on attainment of operational milestones and outputs. The final reports are expected to provide measurement of first, second or third order outcomes to assess the success of the project. This is significant because outcome measurement is not possible until the grant project is completed. Only milestones and output measurements (e.g., development of a compliance handbook, compliance assistance workshops) are available during the operation of the individual projects.

Thus, performance assessment occurs only at the end of a project. Projects we will report on in 2009 are projects initiated in 2005 and 2006.

Data Source: Data on performance are reported by the States for projects funded under the State Innovation Grant Program. Data are collected by the States using a variety of mechanisms depending upon the specific projects. For instance, for Environmental Results Programs (ERPs), the State prepares a compliance manual for a specific business sector and a compliance worksheet. Participating operators self-certify their performance using the worksheet and its checklist. The States audit statistically random samples of the participating facilities and certify the performance of these facilities independently. States are required to report only composite data for these projects. Other types of projects may rely on a facility's environmental monitoring conducted under a permit to certify performance. Only rarely are new data required for a State Innovation Grant Program project. We rely heavily on existing performance assessments conducted under permitting programs to assess baseline and outcome performance improvement. For instance, the grant program has funded several facility environmental management systems (EMS). Facilities typically have independent third-party audits of their EMSs, which create a basis for confidence in the facilities' data. In general EPA is confident that the externally reported results are a fair representation of members' performance.

Methods, Assumptions, and Suitability: Performance assessment methods will vary across project types in this program. For instance, ERPs focus on improvement in compliance rates and program efficiency. Compliance rates are determined by a statistically-based sample audit of participating facilities within an ERP sector by the State. Currently, the State Innovation Grant program is sponsoring ERP projects in a number of business sectors (dry cleaning, printing, auto body repair, auto salvage, Underground Storage Tanks (USTs), Injection Wells, Concentrated Animal Feeding Operations (CAFOs), Oil and Gas well drilling and operation, storm water management, etc). Some of these facilities will report compliance based upon operational processes. Others may be able to go beyond compliance reporting and provide estimates of pollution prevention (e.g., reduction in VOC emissions in pounds).

Other project types, such as Environmental Management Systems will typically will utilize facility monitoring protocols developed for their permits and use those to develop assessments of improvements in emissions and discharges. Where EMS-driven projects also develop engineering estimates of improvements in pollutant discharges brought about by manufacturing changes, those estimates would require verification related to any alteration in permits.

Analysts should bear in mind that these projects almost never produce incremental improvements across their lifetime (e.g., in a 3-year project, one third of the projects proposed benefits will not occur in each year. Rather, project outcomes are generally measurable only at the completion of the project which marks full implementation. In a number of instances, full implementation may require time beyond the grant-funded project period. In these instances we have sought commitments from recipient-states to continue measuring performance and reporting to EPA

after the grant project itself has been completed. The significant impact on the State Innovation Grant program is that outcomes reported in any year will reflect completion of projects initiated 2-4 years earlier and not incremental benefits during the lifetime of a project. Thus, reporting of outcomes in 2009 will be based upon projects funded in FY 2005 and FY 2006.

QA/QC Procedures: Each project funded under the State Innovation Grant Program is required to develop a Quality Assurance Project Plan (QAPP) that is compliant with EPA guidance. The QAPP is reviewed by the designated QA official from the appropriate EPA Region and OEPI's QA reviewer. States must have an approved QAPP before the beginning of any data collection. OEPI has prepared guidance for state grant recipients on development of performance measures and quality assurance plans. OEPI also requires participation by each new state grant recipient in an annual training workshop that addresses these areas. Additionally, final project reports will be made available to other States and to the public for examination. EPA is also a partner with State Innovation Grant recipients in the conduct of open forums for discussion of projects, such as the ERP All-States Meeting held annually to allow open examination of progress and results in each of the ERP projects.

Data Quality Reviews: N/A.

Data Limitations: Potential sources of error include miscalculations, faulty data collection, misreporting, inconsistent reporting, and nonstandard reporting on the part of the facility. Manually entered data are sometimes typed incorrectly.

Because States are required to submit only synoptic (or meta) data with regard to program performance, we rely on the States to apply the appropriate steps to ensure data accuracy and appropriateness of analysis as described in their QAPP. In 2007, OEPI initiated a post-award monitoring program that will include steps to audit reporting under the State Innovation grant Program.

Error Estimate: Not calculated.

References: Information on the State Innovation Grant Program, including State pre-proposals and final workplans can be found on the program website at: http:/www.epa.gov/innovation/stategrants. OEPI published its first State Innovation Grants Program progress report in early 2008.

GOAL 5 OBJECTIVE 3

FY 2009 Performance Measures:

- **Percent of tribes implementing federal regulatory environmental programs in Indian country. (Strategic Target & PART Measure)**
- **Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country. (Strategic Target & PART Measure)**
- **Percent of tribes with an environmental program. (Strategic Target & PART Measure)**
- **Number of environmental programs implemented in Indian country per million dollars. (PART efficiency Measure)**

Performance Database: EPA's American Indian Environmental Office (AIEO) developed an information technology infrastructure, named the Tribal Program Enterprise Architecture (TPEA). The TPEA is a suite of secure Internet-based applications that track environmental conditions and program implementation in Indian country as well as other AIEO business functions. One TPEA application, the Objective 5.3 Reporting System, tracks progress in achieving the performance targets under Goal 5 Objective 3 of EPA's 2006-2011 Strategic Plan – "Improve Human Health and the Environment in Indian Country." EPA staff use the Objective 5.3 Reporting System to establish program performance commitments for future fiscal years and to record actual program performance for overall national program management. This serves as the performance database for all of the strategic targets, annual performance measures and PART measures.

Data Source: Data for the Objective 5.3 Reporting System are input on an ongoing basis by Regional tribal program project officers, as designated by the Regional Indian Coordinators. The system is password protected; all persons authorized to input data have individual passwords.

The original documents for the statements and data entered into the fields of the Objective 5.3 Reporting System can be found in the files of the Regional Tribal Project Officers overseeing the particular programs that are being reported on. For example, documents that verify water quality monitoring activities by a particular tribe will be found in the files of the Regional Water 106 Project Officer for the tribe.

The performance measure, "Percent of tribes implementing Federal regulatory environmental programs in Indian country" tracks the number of "Treatment in a manner similar to a State" (TAS) program approvals or primacies and execution of "Direct Implementation Tribal Cooperative Agreements (DITCAs)."

4-Year Performance Data
Annual Performance Goals and Measures

The performance measure, "Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country," reports the number of active Quality Assurance Project Plans (QAPPs) for monitoring activities. All ongoing environmental monitoring programs are required to have active QAPPs. Regional tribal program liaisons obtain the information from Regional Quality Assurance Officers and input it into the Objective 5.3 Reporting System,. The data are updated continually and are reported mid-year and at the end of each fiscal year.

The performance measure, "Percent of tribes with an environmental program," counts tribes that have an EPA-funded environmental office and/or coordinator staffed in the most current year and that have at least one of the following indicators:

- completed a Tier III Tribal Environmental Agreement (TEA) that specifies actions by EPA and the Tribe, and includes monitoring, as evidenced by a document signed by the tribal government and EPA;
- established environmental laws, codes, ordinances or regulations as evidenced by a document signed by the tribal government;
- completed solid and/or hazardous waste implementation activities; or
- completed an inter-governmental environmental agreement (e.g. State-Tribal Memorandum of Agreement (MOA), Federal-Tribal MOA).

EPA Regional project officers managing tribes with an environmental program input data, classified by tribe, into the Objective 5.3 Reporting System, to derive a national cumulative total.

The performance measure, "Number of environmental programs implemented in Indian country per million dollars," is calculated annually by summing the number of tribes receiving General Assistance Program (GAP) grants, the number of TAS approvals or primacies, the number of DITCAs, and the number of GAP grants that have provisions for the implementation of solid or hazardous waste programs and dividing that sum by the annual GAP appropriation (less rescissions and annual set-asides).

Methods and Assumptions: The Objective 5.3 Reporting System contains all the information for reporting on AIEO performance measures and PART measures. The information is entered into standard query fields in the data system. Thus, there is no allowance for differences in reporting across EPA's Regional offices, and national reports can be assembled in a common framework. The assumption is the authorized person who enters the data is knowledgeable about the performance status.

Suitability: These measures represent progression toward the goal of improving human health and the environment in Indian country by helping tribes plan, develop and establish environmental protection programs.

QA/QC Procedures: The procedures for collecting and reporting on the Objective 5.3 performance measures require that program managers certify the accuracy of the data submitted by the regions to AIEO. This certification procedure is consistent with EPA Information Quality Guidelines (See http://www.epa.gov/quality/informationguidelines/index.html for more information.)

Data Quality Reviews: The certifying official for the information submitted by EPA's Regional offices to AIEO through the Objective 5.3 Reporting System, is the Regional Administrator. However, in some cases the Regional Administrator may wish to delegate the signatory authority to some other official such as the Regional Indian Coordinator. This procedure generally follows guidance provided in EPA Information Quality Guidelines. (See http://intranet.epa.gov/ocfo/policies/iqg/index.html for more information.)

Data Limitations: Because data are input by EPA's Regional Project Officers on an ongoing basis, there may be a time lag between when a tribal program status has been achieved and when the data are entered into the Objective 5.3 Reporting System. Even though the Regional Project Officer may enter data on an ongoing basis, at the end of the reporting cycle the Objective 5.3 Reporting System will be "locked down," with the locked dataset reported for the fiscal year. EPA's Regional Administrator certifies the accuracy of the locked information.

Error Estimate: For the Objective 5.3 Reporting System, errors could occur by mis-entering data or neglecting to enter data. However, the data from each region will be certified as accurate at the end of each reporting cycle; error is estimated to be low, about 1-2 percent.

New/Improved Data or Systems: The Objective 5.3 Reporting System is a part of the AIEO Tribal Program Enterprise Architecture, and is a part of the same Life Cycle milestones of that system. Present focus is on Operations and Maintenance activities for the Tribal Program Enterprise Architecture beginning in FY08.

References:
Objective 5.3 Reporting System: https://iasint.rtpnc.epa.gov/TATS/tats_prv/entry_page
OCFO Information Quality Guidelines: http://intranet.epa.gov/ocfo/policies/iqg/index.html

ENABLING SUPPORT PROGRAMS

FY 2009 Performance Measure:

- **Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days**.

Performance Database: Data is derived from EZ-Hire, EPA's implementation of Monster Inc.'s Quickhire system used for application development, posting, application submission, and

screening. These data is tracked internally and reported on a fiscal year and quarterly basis. The data are reported by the servicing human resources offices and rolled up into Agency-wide averages.

Data Source: The Office of Human Resources (OHR) EZ-Hire System.

Methods, Assumptions and Suitability: Data on new hires are collected by OHR using the EZ-Hire system. OHR uses EZ-Hire to generate a raw data report on a quarterly basis (after the quarter has been completed). The data is downloaded as an Excel spreadsheet and is tracked by vacancy announcement number and formatted into the various components of the Office of Personnel Management's (OPM) 45-day Hiring Model. OHR staff review the results, and identify any anomalies that may need further investigation. The draft report is then sent to the servicing HR Offices so the data can be validated, corrected, and ultimately transferred to the OHR to be finalized. HR Offices also work with the Selecting Officials to develop explanatory justifications for those vacancies which exceeded the 45-day timeframe.

QA/QC Procedures: EZ-Hire tracks vacancy announcement activity from the time the announcement opens until a job offer is made to a candidate by the Selecting Official.

Data Quality Reviews: OHR staff review and analyze the raw data, prior to it being provided to the HR Offices for validation. Local HR Offices review and validate the data, identify anomalies or data-entry errors, make corrections, and provide the updated information to OHR so that the report can be finalized. Questions about the data or resolution of issues of concern are frequently resolved through discussion and consultation with OHR.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: In November 2006, EPA upgraded to the web-based *Hiring Management* version of *Monster Inc.'s Quickhire* hiring management system. This represents a significant milestone building on EPA's early adoption of this system.

References: EZ-Hire

FY 2009 Performance Measure:

- **Average time to hire SES positions from date vacancy closes to date offer is extended, expressed in working days**.

Performance Database: Data is manually maintained by the Executive Resources Staff (ERS) in a Word format. Data is updated thorough-out the various stages of the hiring process.

4-Year Performance Data
Annual Performance Goals and Measures

Data Source: The Office of Human Resources' Executive Resources Staff.

Methods, Assumptions and Suitability: Data from the weekly report is tracked and reported quarterly. ERS staff reviews the results and further investigates any data anomalies prior to finalizing the quarterly report. These data are tracked manually on a weekly basis and reported on a quarterly basis. The data are reported by servicing human resources office and are expressed as an average number of days (where the time to extend an offer for each vacancy is averaged for that servicing HR office.)

QA/QC Procedures: Data are added as vacancy status changes. The weekly report is reviewed by the ERS Team leader. Questions about the data or resolution of issues of concern are frequently resolved through discussion and consultation within the team.

Data Quality Reviews: ERS staff review and analyze the raw data, prior to it being provided to the Team leader for validation. The Team leader reviews the data, identifies anomalies or data-entry errors, and provides the updated information to OHR so that the report can be finalized.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: The current system is sufficient for tracking the SES hiring activities, given the small number of positions filled annually, about 12 per year.

References: Executive Resources Staff

FY 2009 Performance Measure:

- **Agency managers' satisfaction with the initial stages of the human resources hiring process, as measured by the average score across 4 questions (2A through 2D) in the OPM Management Hiring Satisfaction Survey.**

This performance measure examines the selecting official's satisfaction levels in these facets of the vacancy announcement process:

2A- the job summary accurately described the position;
2B - I was involved in the development of the evaluation criteria;
2C - the evaluation criteria encompassed the Knowledge, Skills, Abilities (KSAs) and competencies needed for the job; and,
2D - I received a referral list in a timely manner.

Measured percentage is percent of respondents selecting strongly agree or agree.

4-Year Performance Data
Annual Performance Goals and Measures

Performance Database: Data are derived from OPM's Management Satisfaction Survey which is part of the Government-wide effort to improve the Federal hiring process. OPM releases survey results quarterly based on feedback from selecting officials on questions regarding the Agency's recruitment process. The survey targets satisfaction with the job announcement, resume contents, applicant quality and quantity, and hiring flexibilities available to obtain the candidate of choice. Agencies use the data to identify, develop and implement plans to improve their recruitment efforts.

Data Source: OPM's Management Satisfaction Survey

Methods, Assumptions and Suitability: The survey is web-based and administered by OPM with facilitation by EPA's HR offices. OPM provides the results of the survey once a quarter. Only managers who have made selections for positions are participants in that quarter's survey, and the feedback in the survey is a reflection of that manager's experience in the hiring process.

QA/QC Procedures: EPA uses a certification form signed by the selecting official that verifies that they have taken the survey. That certificate is included in the case file for that vacancy and is included in the document review as part of the Agency's Human Capital Assessment Program. OPM is responsible for compiling the survey results in a quality manner and preparing the Agency's reports. OHR staff review the results, and identify any areas of the hiring process that may need further investigation.

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: OPM's Management Satisfaction Survey

FY 2009 Performance Measure:

- **Maintenance and improvement of Mission Critical Occupation (MCO) employee competencies, as measured by proficiency levels of competencies in MCOs reassessed in FY 2009.**

Performance Database: *Plateau* is a contractor supplied database and assessment tool. The database is populated with competency/skills of selected MCOs that are deemed necessary for successful performance. It includes survey data from employee self-assessments and supervisory assessments on employee competency/skills.

Methods, Assumptions and Suitability: Survey data have been used to assess the competencies of EPA's 6 priority MCOs. Reassessments of the assessed MCOs are repeated and compared to previous assessment baselines.

Data Source: *Plateau* includes survey data from employee self-assessments and supervisory assessments on employee competency/skills.

QA/QC Procedures: The Office of Human Resources will continue to include the supervisory assessment to affirm whether the selected MCO has made progress in developing toward the targeted level of proficiency, identified for successful performance in the necessary competencies.

Data Quality Reviews: N/A

Data Limitations: Employees self-assess their competency/skills which are averaged with supervisor assessments, when available. The reliability of the data is subject to scoring bias as well as over-inflation or under-inflation of self assessments.

Error Estimate: N/A

New/Improved Data or Systems: This is a new competency/skills database.

References: N/A

FY 2009 Performance Measure:

- **Cumulative percentage reduction in energy consumption in EPA's 34 reporting facilities from the FY 2003 baseline**

Performance Database: The Agency's contractor provides energy consumption information quarterly and annually. The Agency keeps the energy consumption data in the "Energy and Water Database," which is a collection of numerous spreadsheets. The contractor is responsible for reviewing and quality assuring/quality checking (QA/QC-ing) the data.

Data Source: The Agency's contractor requests and collects quarterly energy and water reporting forms, utility invoices, and fuel consumption logs from energy reporters at each of EPA's "reporting" facilities (the facilities for which EPA pays the utility bills directly to the utility company). The reported data are based on metered readings from the laboratory's utility bills for certain utilities (natural gas, electricity, purchased steam, chilled water, high temperature hot water, and potable water) and from on-site consumption logs for other utilities (propane and

fuel oil). In instances when data are missing and cannot be retrieved, reported data are based on a proxy or historical average.

Methods, Assumptions, and Suitability: N/A

QA/QC Procedures: EPA's contractor performs an exhaustive review of all invoices and fuel logs to verify that reported consumption and cost data are correct. EPA's Sustainable Facilities Practices Branch compares reported and verified energy use at each reporting facility against previous years' verified data to see if there are any significant and unexplainable increases or decreases in energy consumption and costs.

Data Quality Reviews: N/A

Data Limitations: EPA does not have a formal meter verification program to ensure that an on-site utility meter reading corresponds to the charges included in the utility bill.

New/Improved Data or Systems: N/A

References: N/A

FY 2009 Performance Measures:

- **Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.**
- **Number of states, tribes, and territories that will be able to exchange data with CDX through nodes in real time, using standards and automated data-quality checking.**
- **Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.**

Performance Database: CDX Customer Registration Subsystem.

Data Source: Data are provided by State, private sector, local, and Tribal government CDX users.

Methods, Assumptions, and Suitability: All CDX users must register before they can begin reporting. The records of registration provide an up-to-date, accurate count of users. Users identify themselves with several descriptors and use a number of CDX security mechanisms for ensuring the integrity of individuals' identities.

QA/QC Procedures: QA/QC has been performed in accordance with a CDX Quality Assurance Plan ["Quality Assurance Project Plan for the Central Data Exchange," 10/8/2004] and the CDX Design Document v.3, Appendix K registration procedures [*Central Data Exchange Electronic*

Reporting Prototype System Requirements: Version 3; Document number: EP005S3; December 2000]. Specifically, data are reviewed for authenticity and integrity. Automated edit checking routines are performed in accordance with program specifications and the CDX Quality Assurance Plan. This Plan is currently being updated to incorporate new technology and policy requirements and a draft is scheduled to be released at the end of FY 2007 [contact: Sana Hamady, 202-566-1674]. In FY 2008, CDX will develop robust quality criteria, which will include performance metric results, for the upcoming CDX contract recompete scheduled to be awarded in FY 2009.

Data Quality Reviews: CDX completed its last independent security risk assessment in January 2005, and all vulnerabilities are being reviewed or addressed. In addition, routine audits of CDX data collection procedures, statistics 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 a secondary level of analysis that takes time and human resources. In addition, environmental data collected by CDX is delivered to National data systems in the Agency. Upon receipt, the National systems often conduct a more thorough data quality assurance procedure based on more intensive rules that can be continuously changing based on program requirements. As a result, CDX and these National systems appropriately share the responsibility for ensuring environmental data quality.

Error Estimate: CDX incorporates a number of features to reduce errors in registration data and that contribute greatly to the quality of environmental data entering the Agency. These features include pre-populating data either from CDX or National systems, conducting web-form edit checks, implementing XML schemas for basic edit checking and providing extended quality assurance checks for selected Exchange Network Data flows using Schematron. The potential error in registration data, under CDX responsibility has been assessed to be less than 1 %.

New/Improved Performance Data or Systems: CDX assembles the registration/submission requirements of many different data exchanges with EPA and the States, Tribes, local governments and the regulated community into a centralized environment. This system improves performance tracking of external customers and overall management by making those processes more consistent and comprehensive. 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 additional automated quality assurance procedures for the system and reduce human error.

References: CDX website (www.epa.gov/cdx).

FY 2009 Performance Measure:

- **Percent of Federal Information Security Management Act reportable systems that are certified and accredited**

Performance Database: Automated Security Self-Evaluation and Remediation Tracking (ASSERT) database.

Data Source: Information technology (IT) system owners in Agency Program and Regional offices.

Methods, Assumptions, and Suitability: Annual IT security assessments are conducted using the methodology mandated by the Office of Management and Budget (OMB), the National Institute of Standards, and Technology (NIST) Security Self-Assessment Guide for Information Technology Systems. ASSERT has automated and web-enabled this methodology.

QA/QC Procedures: Automated edit checking routines are performed in accordance with ASSERT design specifications to ensure answers to questions in ASSERT are consistent. The Office of Inspector General consistent with §3545 FISMA, and the Chief Information Officer's information security staff conduct independent evaluations of the assessments. The Agency certifies results to OMB in the annual FISMA report.

Data Quality Reviews: Program offices are required to develop security action plans composed of tasks and milestones to address security weaknesses. Program offices self-report progress toward these milestones. EPA's information security staff review these self-reported data, conduct independent validation of a sample, 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.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References:
Annual Information Security Reports to OMB: Annual Information Security Reports to OMB: http://intranet.epa.gov/itsecurity/progreviews/; OMB guidance memorandum: http://www.whitehouse.gov/omb/memoranda/fy2007/m07-19.pdf; ASSERT web site https://cfint.rtpnc.epa.gov/assert/index.cfm; NIST Special Publication 800-53, Recommended

Security Controls for Federal Information Systems. February 2005: http://csrc.nist.gov/publications/nistpubs/index.html; and, Federal Information Security Management Act, PL107-347: http://csrc.nist.gov/policies/FISMA_final.pdf

FY 2009 Performance Measures:

- **Environmental and business actions taken for improved performance or risk reduction; environmental and business recommendations or risks identified for corrective action; and return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations**
- **Criminal, civil, administrative, and fraud prevention actions**

Performance Database: The OIG Performance Measurement and Results System captures and aggregates information on an array of measures in a logic model format, linking immediate outputs with long-term intermediate outcomes and results. OIG performance measures are designed to demonstrate value added by promoting economy, efficiency and effectiveness; and preventing and detecting fraud, waste, and abuse as described by the Inspector General Act of 1978 (as amended). Because intermediate and long-term results may not be realized for several years, only verifiable results are reported in the year completed. Database measures include numbers of: 1) recommendations for environmental and management improvement; 2) legislative, regulatory policy, directive, or process changes; 3) environmental, program management, security and resource integrity risks identified, reduced, or eliminated; 4) best practices identified and implemented; 5) examples of environmental and management actions taken and improvements made; 6) monetary value of funds questioned, saved, fined, or recovered; 7) criminal, civil, and administrative actions taken, 8) public or congressional inquiries resolved; and 9) certifications, allegations disproved, and cost corrections.

Data Source: Designated OIG staff enter data into the system. Data are from OIG performance evaluations, audits, research, court records, EPA documents, data systems, and reports that track environmental and management actions or improvements made and risks reduced or avoided. OIG also collects independent data from EPA's partners and stakeholders.

Methods, Assumptions, and Suitability: OIG performance results are a chain of linked events, starting with OIG outputs (e.g., recommendations, reports of best practices, and identification of risks). The subsequent actions taken by EPA or its stakeholders/partners, as a result of OIG's outputs, to improve operational efficiency and environmental program delivery are reported as intermediate outcomes. The resulting improvements in operational efficiency, risks reduced/eliminated, and conditions of environmental and human health are reported as outcomes. By using common categories of performance measures, quantitative results can be summed and reported. Each outcome is also qualitatively described, supported, and linked to an OIG product or output. The OIG can only control its outputs and has no authority, beyond its influence, to implement its recommendations that lead to environmental and management outcomes.

QA/QC Procedures: All performance data submitted to the database require at least one verifiable source assuring data accuracy and reliability. Data quality assurance and control are performed as an extension of OIG products and services, subject to rigorous compliance with the Government Auditing Standards of the Comptroller General[15], and regularly reviewed by OIG management, an independent OIG Management Assessment Review Team, and external independent peer reviews. Each Assistant Inspector General certifies the completeness and accuracy of performance data.

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 Measurement and Results System. All data reported are audited internally for accuracy and consistency.

Data Limitations: All OIG staff are responsible for data accuracy in their products and services. However, there is a possibility of incomplete, miscoded, or missing data in the system due to human error or time lags. Data supporting achievement of results are often from indirect or external sources, with their own methods or standards for data verification/validation.

Error Estimate: The error rate for outputs is estimated at +/-2%, while the error rate for reported long-term outcomes is presumably greater because of the longer period needed for tracking results and difficulty in verifying a nexus between our work and subsequent actions and impacts beyond our control. Errors tend to be those of omission.

New/Improved Data or Systems: The OIG developed the Performance Measurement and Results System as a prototype in FY 2001 and constantly revises the clarity and quality of the measures as well as system improvements for ease of use. During FY 2007, the OIG implemented an Audit Follow-up Policy to independently verify the status of Agency actions on OIG recommendations, which serve as the basis for OIG intermediate outcome results reported in the OIG Performance Measurement and Results System. The quality of the data will continue to improve as staff gain greater familiarity with the system and measures, and as OIG performs follow-up verification reviews to identify and track actions and impacts. The OIG is also implementing full costing of OIG products to measure relative return on investment from the application of OIG resources.

References: All OIG non-restricted performance results are referenced in the OIG Performance Measurement and Results System with supporting documentation available either through the OIG Web Site or other Agency databases. The OIG Web Site is www.epa.gov/oig.[16]

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[15] Government Auditing Standards (2007 Revision), General Accounting Office, GAO-07-162G, January 2007; Available on the Internet at www.gao.gov/govaud/ybk01.htm, last updated December 2007.

[16] U.S. EPA, Office of Inspector General, Audits, Evaluations, and Other Publications; Available on the Internet at www.epa.gov/oig , last updated October 2007.

Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification

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COORDINATION WITH OTHER FEDERAL AGENCIES

Environmental Programs

Goal 1- Clean Air and Global Climate Change

Objective: Healthier Outdoor Air

The Environmental Protection Agency (EPA) cooperates with other Federal, state, Tribal, and local agencies in achieving goals related to ground level ozone and particulate matter (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 (COE) 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 (DOI), National Park Service (NPS), in developing its regional haze program and deploying the Interagency Monitoring of Protected Visual Environments (IMPROVE) visibility monitoring network. The operation and analysis of data produced by the particulate matter (PM) monitoring system is an example of the close coordination of effort between the EPA and state and Tribal governments.

For pollution assessments and transport, EPA is working with the National Aeronautics and Space Administration (NASA) on technology transfer using satellite imagery. EPA will be working to further distribute NASA satellite products to and NOAA air quality forecast products to Regions, states, local agencies, and Tribes to provide better understanding of air quality on a day-to-day basis and to assist with PM forecasting. EPA will also work with NASA to develop a better understanding of PM formation using satellite data. EPA works with the Department of the Army, Department of Defense (DoD) on advancing emission measurement technology and with the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce for meteorological support for our modeling and monitoring efforts.

To better understand the magnitude, sources, and causes of mobile source pollution, EPA works with the Departments of Energy (DOE) and DOT to fund research projects. A program to characterize the exhaust emissions from light-duty gasoline vehicles is being co-funded by DOE and DOT. Other DOT 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 Laboratory. EPA also works closely with DOE on refinery cost modeling analyses and the development of clean fuel programs. For mobile sources program outreach, the Agency is participating in a collaborative effort with DOT's Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) 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 (CDC). In addition, EPA is working with DOE to identify opportunities in the Clean Cities program. EPA also works with other Federal agencies such as the U.S. Coast Guard (USCG) on air emission issues. Other programs targeted to reduce air toxics from mobile sources are coordinated with DOT. These partnerships can involve policy

assessments and toxic emission reduction strategies in different regions of the country. EPA is also working with the National Highway Transportation Administration and the Department of Agriculture on the greenhouse gas transportation rules.

To develop new continuous source monitoring technology for toxic metals emitted from smokestacks, EPA has partnered with the DoD. 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.

To reduce air toxic emissions that do not inadvertently increase worker exposures, EPA 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. EPA also works closely with other health agencies such as the CDC, the National Institute of Environmental Health Sciences (NIEHS), and the National Institute for Occupational Safety and Health on health risk characterization. To assess atmospheric deposition and characterize ecological effects, EPA works with NOAA and the Department of the Interior's U.S. Fish and Wildlife Service (USFWS).

The Agency has worked extensively with the Department of Health and Human Services (HHS) on the National Health and Nutritional Evaluation Study 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.

To determine the extent to which agricultural activities contribute to air pollution, 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 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.

In developing regional and international air quality programs and projects and working on regional agreements, EPA works primarily with the Department of State, the Agency for International Development (USAID), and the DOE as well as with regional organizations. EPA's international air quality management program will complement EPA's programs on children's health, Trade and the Environment, and trans-boundary air pollution. In addition, EPA will partner with others worldwide, including international organizations such as the United Nations Environment Programme, the European Union, the Organization for Economic Development and Co-operation (OECD), the North American Commission for Environmental Cooperation (CEC), the World Bank, the Asian Development Bank, and our colleagues in Canada, Mexico, Europe, and Japan. EPA is working with DOE and USTR under the CEC to promote renewable energy markets in North America.

Objective: Healthier Indoor Air

EPA works closely through a variety of mechanisms with a broad range of Federal, state, Tribal,

and local government agencies, industry, non-profit organizations, and individuals, as well as other nations, to promote more effective approaches to identifying and solving indoor air quality problems. At the Federal level, EPA works closely with several departments or agencies:

- Department of Health and Human Services (HHS) to develop and conduction programs aimed at reducing children's exposure to known indoor triggers of asthma, including secondhand smoke;
- Department of Housing and Urban Development (HUD) on home health and 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 and operation 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. EPA plays a leadership role on the President's Task Force on Environmental Health Risks and Safety Risks to Children, particularly with respect to asthma and school environmental health issues.

As Co-chair of the interagency Committee on Indoor Air Quality (CIAQ), EPA works with the CPSC, DOE, the National Institute for Occupational Safety and Health, and OSHA 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.

Objective: Protect the Ozone Layer

In an effort to curb the illegal importation of ozone depleting substances (ODSs), an interagency task force was formed consisting of representatives from EPA, the Departments of Justice (DOJ), Department of Homeland Security (DHS), Department of State, Department of Commerce, and the Internal Revenue Service (IRS). 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 works very closely with the Department of State and other Federal agencies as appropriate in international negotiations among Parties to the Protocol. EPA works with the Office of the United States Trade Representative to analyze potential trade implications in stratospheric protection regulations that affect imports and exports.

EPA is working with USDA and the Department of State to facilitate research and development of alternatives to methyl bromide. EPA collaborates with these agencies to prepare U.S. requests for emergency and critical use exemptions of methyl bromide. EPA is providing input to USDA on rulemakings for methyl bromide-related programs.

EPA consults with the Food and Drug Administration (FDA) on the potential for domestic methyl bromide needs. EPA also coordinates closely with FDA to ensure that sufficient supplies of chlorofluorocarbons (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 combines the critical goals of protecting public health and limiting damage to the stratospheric ozone layer.
EPA works with the CDC and the National Weather Service (NWS) to coordinate the Ultraviolet Radiation (UV) Index and the health messages that accompany index reports. EPA is a member of the Federal Council on Skin Cancer Prevention, which educates and protects all Federal employees from the risks of overexposure to UV radiation.

In addition to collecting its own UV data, EPA coordinates with NASA and NOAA to monitor the state of the stratospheric 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 coordinates with the Small Business Administration (SBA) to ensure that proposed rules are developed in accordance with the Small Business Regulatory Flexibility Act.

Objective: Radiation

The Radiation Program coordinates with Federal and state partners through the use of the Interagency Steering Committee on Radiation Standards (ISCORS); its members include NRC, DOE, DOD, HHS, DOL, DOT, and DHS and their goal is to improve consistency in Federal radiation protection programs. EPA continues to work with other Federal agencies including Nuclear Regulatory Commission (NRC), DOE, and DHS to prevent metals and finished products suspected of having radioactive contamination from entering the country. EPA also works with the DOT on initiatives to promote use of non-nuclear density gauges for highway paving, and with the DOE and NRC to develop state-of-the-art tracking systems for radioactive sources in U.S. commerce. In addition, the program collaborates with state and local officials to maintain and operate the national network of radiation air monitors and continues to improve the sharing of information with DHS, DOE, other federal agencies, and the states to improve EPA's ability to contribute to interagency emergency response and environmental characterization during radiological emergencies.

Objective: Reduce Greenhouse Gas Intensity

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 DOE with significant involvement from USDA, HUD and the National Institute of Standards and Technology (NIST).

Agencies throughout the government make significant contributions to the climate protection programs. For example, 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 working with DOE to demonstrate technologies that oxidize ventilation air methane from coal mines. EPA is broadening its public information transportation choices campaign as a joint effort with 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 work recently completed by an interagency task force, including representatives from the Department of State, EPA, DOE, USDA, DOT, Office of Management and Budget (OMB), Department of Commerce, USGCRP, NOAA, NASA, and the DoD, 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 describes 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 has been a refinement of future goals for these policies and measures which were communicated to the Secretariat of the FCCC in 2002. The "U.S. Climate Action Report 2002: Third National Communication of the United States of America under the United Nations Framework Convention on Climate Change" is available at: http://unfccc.int/resource/docs/natc/usnc3.pdf .

EPA works primarily with the Department of State, USAID and DOE as well as with regional organizations in implementing climate-related programs and projects. In addition, EPA partners with others worldwide, including international organizations such as the United Nations Environment Programme, the United Nations Development Programme, the International Energy Agency, the OECD, the World Bank, the Asian Development Bank, and our colleagues in Canada, Mexico, Europe and Japan.

Objective: Enhance Science and Research:

EPA coordinates its air quality research with other Federal agencies through the Subcommittee on Air Quality Research[1] of the NSTC Committee on Environment and Natural Resources (CENR). The Agency and NIEHS co-chaired the subcommittee's Particulate Matter Research Coordination Working Group, which produced a strategic plan[2] for Federal research on the health and environmental effects, exposures, atmospheric processes, source characterization and control of fine airborne particulate matter. The Agency is also a charter member of NARSTO,[3] an international public-private partnership established in 1995 to improve management of air quality across North America. EPA coordinates specific research projects with other Federal agencies where appropriate and supports air-related research at universities and nonprofit organizations through its Science to Achieve Results (STAR) research grants program.

Goal 2- Clean and Safe Water

Objective: Protect Human Health

The 1996 SDWA amendments include a provision that mandates joint EPA/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

[1] For more information, see <http://www.al.noaa.gov/AQRS/>.
[2] For more information, see <http://www.al.noaa.gov/AQRS/reports/srppm.html>.
[3] For more information, see <http://www.narsto.org/>.

coordination on research on microbial contaminants in drinking water. EPA has in place a MOU and an Interagency Agreement (IAG) with the CDC 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.

Public Water Systems (PWS)

Some Federal agencies, (i.e., USDA (Forest Service), DoD, DOE, DOI/NPS, 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, USDA (Forest Service, Natural Resources Conservation Service, Cooperative State Research, Education, and Extension Service (CSREES), Rural Utilities Service); DOT, DoD, DOE, DOI (NPS and Bureau of Indian Affairs (BIA), Land Management, and Reclamation); HHS (Indian Health Service) and the Tennessee Valley Authority (TVA).

Tribal Access Coordination

EPA will continue to work with other Federal agencies to develop a coordinated approach to improving Tribal access to safe drinking water. In response to commitments made during the 2002 World Summit in Johannesburg, the EPA committed to the goal of coordinating with other Federal agencies to reduce by half the number of households on Tribal lands lacking access to safe drinking water by 2015. United Nations. 2002. *Report of the World Summit on Sustainable Development: Johannesburg, South Africa, 26 August – 4 September, 2002.* New York, NY: United Nations.

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. This collaborative effort has improved the quality of information to support risk management decision-making at all levels of government, generated valuable new data, and eliminated potential redundancies.

Collaboration with Public and Private Partners on Critical Water Infrastructure Protection

EPA coordinates with other Federal agencies, primarily DHS, CDC, FDA and DoD on biological, chemical, and radiological contaminants, and how to respond to their presence in drinking water and wastewater systems. A close linkage with the FBI, particularly with respect to

ensuring the effectiveness of the ISAC, will be continued. The Agency is strengthening its working relationships with the American Water Works Association Research Foundation, the Water Environment Research Federation and other research institutions to increase our knowledge on technologies to detect contaminants, monitoring protocols and techniques, and treatment effectiveness.

Collaboration with FDA

EPA and FDA have issued joint national fish consumption advisories to protect the public from exposure to mercury in commercially and recreationally caught fish, as well as fish caught for subsistence. EPA's advisory covers the recreational and subsistence fisheries in fresh waters where states and Tribes have not assessed the waters for the need for an advisory. ibid. http://map1.epa.gov/html/federaladv FDA's advisory covers commercially caught fish, and fish caught in marine waters. Ibid. http://map1.epa.gov/html/federaladv EPA works closely with FDA to distribute the advisory to the public. In addition, EPA works with FDA to investigate the need for advisories for other contaminants and to ensure that these federal advisories support and augment advisories issued by states and Tribes.

Beach Monitoring and Public Notification

The BEACH Act requires that all Federal agencies with jurisdiction over coastal and Great Lakes recreation waters adjacent to beaches used by the public implement beach monitoring and public notification programs. These programs must be consistent with guidance published by EPA. ibid. "National Beach Guidance and Required Performance Criteria for Grants." EPA will continue to work with the USGS and other Federal agencies to ensure that their beach water quality monitoring and notification programs are technically sound and consistent with program performance criteria published by EPA.

Objective: Protect Water Quality

Watersheds

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), DOI (Bureau of Land Management, Office of Surface Mining, USGS, USFWS, and the Bureau of Indian Affairs), NOAA, DOT, and DoD (Navy and COE). 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.

National Pollutant Discharge Elimination System Program (NPDES)

Since inception of the NPDES program under Section 402 of the CWA, EPA and the authorized states have developed expanded relationships with various Federal agencies to implement pollution controls for point sources. EPA works closely with USFWS 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 USGS to help confirm pollution control decisions. The Agency also works closely with SBA and the Office of Management and Budget (OMB) to ensure that regulatory programs are fair and reasonable. The Agency coordinates with the NOAA on efforts to ensure that NPDES programs support coastal and national estuary efforts; and with the DOI on mining issues.

Joint Strategy for Animal Feeding Operations

The Agency is working closely with the 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 will take 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's recent revisions to the CAFO Regulations (effluent guidelines and NPDES permit regulations) will be a key element of EPA and USDA's plan to address water pollution from CAFOs. EPA and USDA senior management meet routinely to ensure effective coordination across the two agencies.

Clean Water State Revolving Fund (CWSRF)

Representatives from EPA's SRF program, HUD's Community Development Block Grant program, and USDA's Rural Utility Service have signed a MOU 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.

In implementation of the Indian set-aside grant program under Title VI of the CWA, 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 USDA formalized a partnership between the two agencies to provide coordinated financial and technical assistance to Tribes.

Nonpoint Sources

EPA will continue to work closely with its Federal partners to achieve our goals for reducing pollutant discharges from nonpoint sources, including reduction targets for sediments, nitrogen and phosphorous. Most significantly, EPA will continue to work with the 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 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.

EPA will also work with other Federal agencies to advance a watershed approach to Federal land and resource management 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 a watershed approach will require coordination among Federal agencies at a watershed scale and collaboration with states, Tribes and other interested stakeholders.

Vessel Discharges

Regarding vessel discharges, EPA will continue working closely with the USCG on addressing ballast water discharges domestically, and with the interagency work group and U.S. delegation to Marine Environmental Protection Committee (MEPC) on international controls. EPA will continue to work closely with the USCG, Alaska and other states, and the International Council of Cruise Lines regarding regulatory and non-regulatory approaches to managing wastewater discharges from cruise ships. EPA will also continue to work with the Coast Guard regarding the vessel sewage discharge standards and with the Navy on developing Uniform National Discharge Standards for Armed Forces vessels. Regarding dredged material management, EPA will continue to work closely with the COE on standards for permit review, as well as site selection/designation and monitoring.

OIA also serves as the primary point-of-contact and liaison with USAID. Specially drawing on expertise from throughout EPA, OIA administers a number of interagency agreements for environmental assistance.

EPA works closely with a number of other Federal agencies with environmental, health, or safety mandates. These include (among others) the DOL, DOT, USDA, DOI, HHS and FDA.

EPA works with the Department of State, NOAA, USCG, Navy, and other Federal agencies in developing the technical basis and policy decisions necessary for negotiating global treaties concerning marine antifouling systems, invasive species, and air pollution from ships. EPA also works with the same Agencies in addressing land-based sources of marine pollution in the Gulf of Mexico and Wider Caribbean Basin.

Objective: Enhance Science and Research

While EPA is the Federal agency mandated to ensure 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, the CDC and NIEHS conduct health effects and exposure research. FDA also performs research on children's risks.

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. Cooperative research efforts have been ongoing with the American Water Works Association Research Foundation and other stakeholders to coordinate drinking water research. EPA is also working with USGS to evaluate performance of newly developed methods for measuring microbes in potential drinking water sources.

EPA has developed joint research initiatives with NOAA and USGS for linking monitoring data and field study information with available toxicity data and assessment models for developing sediment criteria.

EPA is also working with other agencies (FDA, USGS, USDA, NOOA, CDC) on new contaminants of concern in the environment. EPA and others are gathering information on the occurrence, health and ecological effects, and is developing techniques to measure these emerging contaminants in water, fish tissue, and biosolids. These emerging contaminants include pharmaceuticals and personal care products (PPCPs), endocrine disrupting compounds (EDCs), polybrominated diphenyl ether flame retardants (PBDEs), perfluorooctanoate (PFOA), nanomaterials, and prions. Data gaps are being identified for further research into whether there is a link between specific contaminants and adverse impacts to humans or aquatic organisms.

The Committee on Environment and Natural Resources (CENR) is also coordinating the research efforts among Federal agencies to assess the impacts of nutrients and hypoxia in the Gulf of Mexico.

Urban wet weather flow research is being coordinated with other organizations such as the Water Environment Research Foundation's Wet Weather Advisory Panel, the ASCE Urban Water Resources Research Council, the COE, and USGS. Research on the characterization and management of pollutants from agricultural operations (e.g., CAFOs) is being coordinated with USDA through workshops and other discussions.

EPA is pursuing collaborative research projects with the USGS to utilize water quality data from urban areas obtained through the USGS National Ambient Water Quality Assessment (NAWQA) program, showing levels of pesticides that are even higher than in many agricultural area streams. These data have potential uses for identifying sources of urban pesticides, and EPA will evaluate how the USGS data could be integrated into the Geographic Information System (GIS) database system.

The Drinking Water and Water Quality research programs plan to collaborate with the American Water Works Association Research Foundation, the Global Water Research Coalition, the National Research Council, Institute for Research in Construction, the American Society for Civil Engineers and several university Research organizations including Penn State University,

the University of Houston, Louisiana Tech University, and the Polytechnic University of New York to carryout the new Water Infrastructure Initiative.

Goal 3-Land Preservation and Restoration

Objective: Preserve Land

Pollution prevention activities entail coordination with other Federal departments and agencies. EPA coordinates with the General Services Administration (GSA) on the use of safer products for indoor painting and cleaning, with the Department of Defense (DoD) on the use of safer paving materials for parking lots, and with the Defense Logistics Agency on safer solvents. The program also works with the National Institute of Standards and Technology and other groups to develop standards for Environmental Management Systems.

In addition to business, industry, and other non-governmental organizations, EPA works with Federal, state, Tribal, and local governments to encourage reduced generation and safe recycling of wastes. Partners in this effort include the Environmental Council of States and the Association of State and Territorial Solid Waste Management Officials.

The Federal government is the single largest potential source for "green" procurement in the country, for office products as well as products for industrial use. EPA works with the Office of Federal Environmental Executive and other Federal agencies and departments in advancing the purchase and use of recycled-content and other "green" products. In particular, the Agency is currently engaged with other organizations within the Executive Branch to foster compliance with Executive Order 13423 and in tracking and reporting purchases of products made with recycled contents, in promoting electronic stewardship and achieving waste reduction and recycling goals.

In addition, the Agency is currently engaged with the DoD, the Department of Education, the Department of Energy (DOE), the U.S. Postal Service, 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 and the Office of the Federal Environmental Executive launched the Federal Electronics Challenge which will lead to increased reuse and recycling of an array of computers and other electronics hardware used by civilian and military agencies.

Objective: Restore Land

Superfund Remedial Program

The Superfund Remedial program coordinates with several other Federal agencies, such as ATSDR or NIEHS, in providing numerous Superfund related services in order to accomplish the program's mission. In FY 2009, EPA will have active interagency agreements with the National Oceanic and Atmospheric Administration (NOAA) and the Department of the Interior (DOI).

The U.S. Army Corps of Engineers also substantially contributes to the cleanup of Superfund sites by providing technical support for the design and construction of many fund-financed

remediation projects through site-specific interagency agreements. This Federal partner has the technical design and construction expertise and contracting capability needed to assist EPA regions in implementing most of Superfund's remedial action projects. This agency also provides technical on-site support to Regions in the enforcement oversight of numerous construction projects performed by private Potentially Responsible Parties (PRPs).

Superfund Federal Facilities Program

The Superfund Federal Facilities Program coordinates with Federal agencies, states, Tribes and state associations and others to implement its statutory responsibilities to ensure cleanup and property reuse. The Program provides technical and regulatory oversight at Federal facilities to ensure human health and the environment are protected.

EPA has entered into Interagency Agreements (IAGs) with DoD and DOE to expedite the cleanup and transfer of Federal properties, and was recently approached by the U.S. Coast Guard for oversight assistance as they focus on downsizing their lighthouse inventory. A Memorandum of Understanding has been negotiated with DoD to continue the Agency's oversight support through September 30, 2011 for the acceleration of cleanup and property transfer at Base Realignment and Closure (BRAC) installations affected by the first four rounds of BRAC. In addition, EPA has signed an IAG with DOE for technical input regarding innovative and flexible regulatory approaches, streamlining of documentation, integration of projects, deletion of sites from the National Priorities List (NPL), field assessments, and development of management documents and processes. The joint EPA/DOE IAG has received recognition as a model for potential use at other DOE field offices.

Resource Conservation and Recovery Act

The RCRA Permitting and Corrective Action Programs coordinate closely with other Federal agencies, primarily the DoD and DOE, which have many sites in the corrective action and permitting universe. Encouraging Federal facilities to meet the RCRA Corrective Action and permitting program's goals remains a top priority.

RCRA Programs also coordinate with the Department of Commerce and the Department of State to ensure the safe movement of domestic and international shipments of hazardous waste.

Leaking Underground Storage Tanks

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.

States 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.

Emergency Preparedness and Response

EPA plays a major role in reducing the risks that accidental and intentional releases of harmful substances and oil pose to human health and the environment. EPA implements the Emergency Preparedness program coordination with the Department of Homeland Security and other Federal agencies to deliver Federal assistance to state, local, and Tribal governments during natural disasters and other major environmental incidents. This requires continuous coordination with many Federal, state and local agencies. The Agency participates with other Federal agencies to develop national planning and implementation policies at the operational level.

The National Response Plan (NRP), under the direction of the Department of Homeland Security (DHS), provides for the delivery of Federal assistance to states to help them deal with the consequences of terrorist events as well as natural and other significant disasters. EPA maintains the lead responsibility for the NRP's Emergency Support Function covering inland hazardous materials and petroleum releases and participates in the Federal Emergency Support Function Leaders Group which addresses NRP planning and implementation at the operational level.

EPA coordinates its preparedness activities with DHS, FEMA, the Federal Bureau of Investigation, and other Federal agencies, states and local governments. EPA will continue to clarify its roles and responsibilities to ensure that Agency security programs are consistent with the national homeland security strategy.

Superfund Enforcement

As required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Executive Order (EO) 12580, OSRE coordinates with other federal agencies in their use of CERCLA enforcement authority. This includes the coordinated use of CERCLA enforcement authority at individual hazardous waste sites that are located on both nonfederal land (EPA jurisdiction) and federal lands (other agency jurisdiction). As required by EO13016, the Agency also coordinates the use of CERCLA section 106 administrative order authority by other Departments and agencies.

EPA also coordinates with the Departments of Interior, Agriculture, and Commerce to ensure that appropriate and timely notices required under CERCLA are sent to the Natural Resource Trustees. The Department of Justice also provides assistance to EPA with judicial referrals seeking recovery of response costs incurred by the U.S., injunctive relief to implement response actions, or enforcement of other CERCLA requirements.

Superfund Federal Facilities Enforcement Program

The Superfund Federal Facilities Enforcement program ensures that 1) all Federal facility sites on the National Priority List have interagency agreements (IAGs), which provide enforceable schedules for the progression of the entire cleanup; 2) these IAGs are monitored for compliance; and 3) Federal sites that are transferred to new owners are transferred in an environmentally

responsible manner. After years of service and operation, some Federal facilities contain environmental contamination, such as hazardous wastes, unexploded ordnance, radioactive wastes or other toxic substances. To enable the cleanup and reuse of such sites, the Federal Facilities Enforcement program coordinates creative solutions that protect both human health and the environment. These enforcement solutions help restore facilities so they can once again serve an important role in the economy and welfare of local communities and our country.

Oil Spills

Under the Oil Spill Program, EPA works with other Federal agencies such as U.S. Fish and Wildlife Service, the U.S. Coast Guard (USCG), NOAA, FEMA, DOI, DOT, DOE, 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. In FY 2009, EPA will have an active interagency agreement with the USCG. EPA and the USCG work in coordination with other Federal authorities to implement the National Preparedness for Response Program.

Objective: Enhance Science and Research

EPA expends substantial effort coordinating its research with other Federal agencies, including work with DoD in its Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program, DOE and its Office of Health and Environmental Research. EPA also conducts collaborative laboratory research with DoD, DOE, DOI (particularly the USGS), and NASA to improve characterization and risk management options for dealing with subsurface contamination.

The Agency is also working with NIEHS, which manages a large basic research program focusing on Superfund issues, to advance fundamental Superfund research. The Agency for Toxic Substances and Disease Registry (ATSDR) also provides critical health-based information to assist EPA in making effective cleanup decisions. EPA works with these agencies on collaborative projects, information exchange, and identification of research issues and has a MOU with each agency. EPA, Army Corps of Engineers, and Navy recently signed a MOU to increase collaboration and coordination in contaminated sediments research. Additionally, the Interstate Technology Regulatory Council (ITRC) has proved an effective forum for coordinating Federal and state activities and for defining continuing research needs through its teams on topics including permeable reactive barriers, radionuclides, and Brownfields EPA has developed an MOU[4] with several other agencies [DOE, DoD, NRC, USGS, NOAA, and USDA] for multimedia modeling research and development.

Other research efforts involving coordination include the unique controlled-spill field research facility designed in cooperation with the Bureau of Reclamation. 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.

[4] For more information please go to: Interagency Steering Committee on Multimedia Environmental Models MOU, http://www.iscmem.org/Memorandum.htm

Goal 4-Healthy Communities and Ecosystems

Coordination with state lead agencies and with the 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 and Worker Protection programs and 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, agencies implementing various pesticide programs and projects, and the general public. Outreach and coordination activities are essential to effective implementation of regulatory decisions. In addition coordination activities protect workers and endangered species, provide training for pesticide applicators, promote integrated pest management and environmental stewardship, and support for 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. Such training includes instructing private applicators on the proper use of personal protective equipment and application equipment calibration, handling spill and injury situations, farm family safety, preventing pesticide spray 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.

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 health and environment from hazardous or higher risk pesticides. In May 1991, the 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 (FQPA). The system provides improved data collection of pesticide residues, standardized analytical and reporting methods, and 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.

FQPA requires EPA to consult with other government agencies on major decisions. EPA, USDA and FDA work closely together using both a MOU and working committees to deal with a variety of issues that affect the involved agencies' missions. For example, 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. The Agency coordinates with USDA/ARS in promotion and communication of resistance management strategies.

Additionally, we participate actively in the Federal Interagency Committee on Invasive Animals and Pathogens (ITAP) which includes members from USDA, DOL, DoD, DHS and CDC to coordinate planning and technical advice among Federal entities involved in invasive species research, control and management.

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. The HSS/FDA enforces tolerances for most foods and the USDA/Food Safety and Inspection Service enforces tolerances 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 (CEC), the Organization for Economic Cooperation and Development (OECD) and NAFTA Commission. These activities serve 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 works closely with Federal agencies to improve the health of children and older adults. Working with the CDC, the Environmental Council of the States (ECOS), and the Association of State and Territorial Health Officials (ASTHO), a national action agenda to reduce environmental triggers of childhood asthma was developed and implemented.

The Agency continues to work with other Federal agencies in the development of children's environmental health indicators used to monitor the outcomes of children's health efforts. The Agency collaborates with the CDC, National Center for Health Statistics and obtains approval from the Federal Interagency Forum on Child and Family Statistics (www.childstats.gov) on the reporting of appropriate children's health indicators and data. EPA also participates in the development of the annual report entitled "America's Children: Key National Indicators of Well-Being."

As a member of the Interagency Forum on Aging Related Statistics, EPA helps to assure that key indicators associated with important aspects of older Americans' lives are considered in reports such as "Older Americans 2004: Key Indicators of Well-Being."

EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) support the Pediatric Environmental Health Specialty Units (PEHSUs) which provide education and consultation services on children's environmental health issues to health professionals, public health officials, and the public.

EPA works closely with other Federal agencies to improve children's health in schools. For example, EPA has incorporated into the new Healthy School Environments Assessment Tool (HealthySEAT), a number of recommendations and requirements from the Department of Education, the CDC, DOT, DOE, CPSC and OSHA.

EPA relies on data from HHS to help assess the risk of pesticides 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.
EPA's chemical testing data provides information for the OSHA worker protection programs, NIOSH for research, and the Consumer Product Safety Commission (CPSC) for informing consumers about products through labeling. EPA frequently consults with these Agencies on project design, progress and the results of chemical testing projects.

The Agency works with a full range of stakeholders on homeland security issues: USDA, CDC, other Federal agencies, industry and the scientific community. Review of the agents that may be effective against anthrax has involved GSA, State Department, Research Institute for Infectious Disease, FDA, EOSA, USPS, and others, and this effort will build on this network.

The Acute Exposure Guidelines (AEGL) program is a collaborative effort that includes ten Federal agencies (EPA, DHS, DOE, DoD, DOT, NIOSH, OSHA, CDC, ATSDR, and FDA), numerous state agencies, private industry, academia, emergency medical associations, unions, and other organizations in the private sector. The program also has been supported internationally by the OECD and includes active participation by the Netherlands, Germany and France.

The success of EPA's lead program is due in part to effective coordination with other Federal agencies, states and Indian Tribes through the President's Task Force on Environmental Health Risks and Safety Risks to Children. EPA will continue to coordinate with HUD to clarify how new rules may affect existing EPA and HUD regulatory programs, and with the FHWA and OSHA on worker protection issues. EPA will continue to work closely with state and Federally recognized Tribes to ensure that authorized state and Tribal programs continue to comply with requirements established under TSCA, that the ongoing Federal accreditation certification and training program for lead professionals is administered effectively, and states and Tribes adopt the Renovation and Remodeling and the Buildings and Structures Rules when these rules become effective.

EPA has a MOU with HUD on coordination of efforts on lead-based paint issues. As a result of the MOU, EPA and HUD have co-chaired the President's Task Force since 1997. There are fourteen other Federal agencies including CDC and DoD on the Task Force. HUD and EPA also maintain the National Lead Information Center 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 safe PCB disposal is an area of ongoing emphasis with the DoD, and particularly with the U.S. Navy, which has special concerns regarding PCBs encountered during ship scrapping. 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.

To effectively participate in 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. For example, EPA has an interest in ensuring that the listing of chemicals, including the application of criteria and processes for evaluating future chemicals for possible international controls, is based on sound science. Similarly, the Agency typically coordinates with FDA's National Toxicology Program, the CDC/ATSDR, 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 also with various international organizations such as the Intergovernmental Forum on Chemical Safety (IFCS), the North American Commission on Environmental Cooperation (CEC), OECD, the United Nations Environment Program (UNEP) and the CODEX Alimentarius Commission. NAFTA and cooperation with Canada and Mexico play an integral part in the harmonization of data requirements.

EPA is a leader in global discussions on mercury and was instrumental in the launch of UNEP's Global Mercury Program, and we will continue to work with developing countries and with other developed countries in the context of that program. In addition, we have developed a strong network of domestic partners interested in working on this issue, including the DOE and the USGS.

EPA has developed cooperative efforts on persistent organic pollutants (POPs) with key international organizations and bodies, such as the United Nations Food and Agricultural Organization, the United Nations Environment Program, the Arctic Council, and the World Bank. EPA is partnering with domestic and international industry groups and foreign governments to develop successful programs.

Objective: Communities

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) and the North American Development Bank (NADBank), which manages the Border Environment Infrastructure Fund (BEIF), to support the financing and construction of much needed environmental infrastructure.

The BECC, with headquarters in Ciudad Juarez, Chihuahua, Mexico, assists local communities and other sponsors in developing and implementing environmental infrastructure projects. The BECC also certifies projects as eligible for NADBank financing. The 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.

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. Over the last several years, EPA has continued to work with the U.S. and Mexican Sections of the International Boundary and Water Commission and Mexico's national water commission, Comisión Nacional del Agua (CONAGUA), to further efforts to improve drinking water and wastewater services to communities within 100 km on the U.S. and 300 km on the Mexico side of the U.S.-Mexico border.

Brownfields

EPA continues to lead the Brownfields Federal Partnership. The Partnership includes more than 20 federal agencies dedicated to the cleanup and redevelopment of brownfields properties. Partner agencies work together to prevent, assess, safely clean up, and redevelop brownfields. The Brownfields Federal Partnership's on-going efforts include promoting the Portfields and Mine-Scarred Lands projects and looking for additional opportunities to jointly promote community revitalization by participating in multi-agency collaborative projects, holding regular meetings with federal partners, and supporting regional efforts to coordinate federal revitalization support to state and local agencies.

Environmental Justice

Through the Federal Interagency Working Group on Environmental Justice (IWG), EPA is working in partnership with ten other federal agencies to address the environmental and public health issues facing communities with environmental justice concerns. In 2009, the IWG will continue its efforts to work collaboratively and constructively with all levels of government, and throughout the public and private sectors. The issues range from lead exposure, asthma, safe drinking water and sanitation systems to hazardous waste clean-up, renewable energy/wind power development, and sustainable environmentally-sound economies. The IWG is utilizing

EPA's collaborative problem-solving model, based on the experiences of federal collaborative partnerships, to improve the federal government's effectiveness in addressing the environmental and public health concerns facing communities. As the lead agency, EPA shares its knowledge, experience and offers assistance to other federal agencies as they enhance their strategies to integrate environmental justice into their programs, policies and activities.

Objective: Ecosystems

National Estuary Program

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. Common Federal partners include NOAA, USFWS, COE, and USDA. Other partners include state and local government agencies, universities, industry, non-governmental organizations (NGO), and members of the public.

Wetlands

Federal agencies share the goal of increasing wetlands functions and values, and implementing a fair and flexible approach to wetlands regulations. In addition, EPA has committed to working with ACOE to ensure that the Clean Water Act Section 404 program is more open, consistent, predictable, and based on sound science.

Coastal America

In efforts to better leverage our collaborative authorities to address coastal communities' environmental issues (e.g., coastal habitat losses, nonpoint source pollution, endangered species, invasive species, etc.), EPA, by memorandum of agreement in 2002 entered into an agreement with Multi-agency signatories. November 2002. *Coastal America 2002 Memorandum of Understanding.* Available online at http://www.coastalamerica.gov/text/mou02.htm

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..." the Great Lakes National Program Office (GLNPO) is engaged in extensive coordination efforts with state, Tribal, and other Federal agencies, as well as with our counterparts in Canada pursuant to the Great Lakes Water Quality Agreement (GLWQA). EPA leads a Federal Interagency Task Force, created by EO 13340, charged with increasing and improving collaboration and integration among Federal programs involved in Great Lakes environmental activities. The Great Lakes task force brings together ten Cabinet department and Federal agency heads to coordinate restoration of the Great Lakes, focusing on outcomes, such as cleaner water and sustainable fisheries, and targeting measurable results. In December 2005, the Great Lakes Regional Collaboration issued a Great Lakes Regional Collaboration Strategy. This Strategy is being used to guide the Great Lakes environmental efforts. Coordination by GLNPO supports the GLWQA

and other efforts to improve the Great Lakes: GLNPO monitoring involves extensive coordination among state, federal, and provincial 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; and 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 30 remaining U.S./binational Areas of Concern.

Chesapeake Bay

The Chesapeake Bay Program has a Federal Agencies Committee, chaired by EPA, which was formed in 1984 and has met regularly ever since. There are currently over 20 different Federal agencies actively involved with the Bay Program through the Federal Agencies Committee. The Federal agencies have worked together over the past decade to implement the commitments laid out in the 1994 *Agreement of Federal Agencies on Ecosystem Management in the Chesapeake Bay* and the 1998 *Federal Agencies Chesapeake Ecosystem Unified Plan* (*FACEUP*). The Federal Agencies Committee has been focusing on how its members can help to achieve the 104 commitments contained in the *Chesapeake 2000* agreement adopted by the Chesapeake Bay Program in June 2000. Through this interagency partnership Federal agencies have contributed to some major successes, such as the U.S. Forest Service helping to meet the year 2010 goal to restore 2,010 miles of riparian forest buffers eight years early; the NPS the effort to establish over 500 miles of water trails three years early; and the USFWS in reaching the Program's fish passage goal of reopening 1,357 miles of formerly blocked river habitat in 2004. Also in 2004, through the Federal Agencies Committee, the members sought better coordination of agency budgets and other programs to try to leverage maximum benefit to the state, private, and Federal efforts protect and restore the Bay.

Gulf of Mexico

Key to the continued progress of the Gulf of Mexico Program is a broad multi-organizational Gulf states-led partnership comprised of regional; business and industry; agriculture; state and local government; citizens; environmental and fishery interests; and, numerous Federal departments and agencies. This Gulf partnership is comprised of members of the Gulf Program's Policy Review Board, subcommittees, and workgroups. Established in 1988, the Gulf of Mexico Program is designed to assist the Gulf States and stakeholders in developing a regional, ecosystem-based framework for restoring and protecting the Gulf of Mexico through coordinated Gulf-wide as well as priority area-specific efforts. The Gulf States strategically identify the key environmental issues and work at the regional, state, and local level to define, recommend, and voluntarily implement the supporting solutions. To achieve the Program's environmental objectives, the partnership must target specific Federal, state, local, and private programs, processes, and financial authorities in order to leverage the resources needed to support state and community actions.

Objective: Enhance Science and Research

Several Federal agencies sponsor research on variability and susceptibility in risks from exposure to environmental contaminants. EPA collaborates with a number of the Institutes within the NIH and CDC. For example, NIEHS conducts multi-disciplinary biomedical research programs, prevention and intervention efforts, and communication strategies. The NIEHS program includes an effort to study the effects of chemicals, including pesticides and other toxics, on children. EPA collaborates with NIEHS in supporting the Centers for Children's Environmental Health and Disease Prevention, which study whether and how environmental factors play a role in children's health. EPA coordinates with ATSDR through a memo of understanding on the development of toxicological reviews and toxicology profiles, respectively. EPA also is coordinating improvements to the IRIS process through an ad hoc working group of federal partners (e.g., DOD, DOE, and NASA). The Agency collaborates with the National Academy of Sciences (NAS) on very difficult and complex human health risk assessments through consultation or review.

Research in ecosystems protection is coordinated government-wide through the Committee on Environment and Natural Resources (CENR). EPA actively participates in the CENR and all work is fully consistent with, and complementary to, other Committee member activities. The Ecological Research Program (ERP) scientists staff two CENR Subcommittees: the Subcommittee on Ecological Systems (SES) and the Subcommittee on Water Availability and Quality (SWAQ). The ERP has initiated discussions within the SES on the subject of ecosystem services and potential ERP collaborations are being explored with the U.S. Geological Service (USGS) and with USDA Forest Service. Within SWAQ, the ERP has contributed to an initiative for a comprehensive census of water availability and quality, including the use of Environmental Monitoring and Assessment Program methods and ongoing surveys as data sources. In addition, the ERP has taken a lead role with USGS in preparing a SWAQ document outlining new challenges for integrated management of water resources, including strategic needs for monitoring and modeling methods, and identifying water requirements needed to support the ecological integrity of aquatic ecosystems.

Consistent with the broad scope of the ecological research program, ERP has had complementary and joint programs with FS, USGS, USDA, NOAA, BLM, USFS, NGOs, and many others specifically to minimize duplication, maximize scope, and maintain a real time information flow that have been ongoing since the inception of the program. For example, all of these organizations work together to produce the National Land Cover Data used by all landscape ecologists nationally. Each contributes funding, services and research to this uniquely successful effort.

Homeland Security research is conducted in collaboration with numerous agencies, leveraging funding across multiple programs and producing synergistic results. EPA's National Homeland Security Research Center (NHSRC) works closely with the DHS to assure that EPA's efforts are directly supportive of DHS priorities. EPA is also working with DHS to provide support and guidance to DHS in the startup of their University Centers of Excellence program.

Recognizing that the DoD has significant expertise and facilities related to biological and chemical warfare agents, the NHSRC works closely with the Edgewood Chemical and Biological Center (ECBC), the Technical Support Working Group, the Army Corps of Engineers, and other Department of Defense organizations to address areas of mutual interest and concern. In conducting biological agent research, the NHSRC is also collaborating with CDC. The NHSRC works with DOE to access and support research conducted by DOE's National Laboratories, as well as to obtain data related to radioactive materials.

In the computational toxicology program, through its ToxCast™ program, a multi-component effort launched in FY 2007, the Agency is obtaining high-throughput screening data on 320 chemicals of known toxicological profiles. More than 400 endpoints are being generated on each chemical through multiple research contracts and an Interagency Agreement with the National Institutes of Health Molecular Libraries Initiative at the National Chemical Genomics Center.

In addition to these major collaborations, the NHSRC has relationships with numerous other Federal agencies, including the U.S. Air Force, U.S. Navy, FDA, USGS and NIST. Also, the NHSRC is working with state and local emergency response personnel to understand better their needs and build relationships, which will enable the quick deployment of NHSRC products. In the water infrastructure arena, the NHSRC is providing information to the Water Information Sharing and Analysis Center (WaterISAC) operated by the Association of Metropolitan Water Agencies (AMWA). The NAS has also been engaged to provide advice on the long-term direction of the water research and technical support program.

EPA coordinates its nanotechnology research with other Federal agencies through the National Nanotechnology Initiative (NNI),[5] which is managed under the Subcommittee on Nanoscale Science, Engineering and Technology (NSET) of the NSTC Committee on Technology (CoT). The Agency's Science to Achieve Results (STAR) program, which awards research grants to universities and non-profit organizations, has issued its recent nanotechnology grants[6] jointly with NIOSH, NIEHS, and NSF.

The Agency coordinates its global change research with other Federal agencies through the Climate Change Science Program (CCSP),[7] which is managed under the Subcommittee on Global Change Research of the NSTC Committee on Environment and Natural Resources (CENR).

EPA collaborates with DOE, USGS, and the Electric Power Research Institute (EPRI)[8] to conduct research on mercury. EPA also works with other Federal agencies to coordinate U.S. participation in the Arctic Mercury Project, a partnership established in 2001 by the eight member states of the Arctic Council—Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the U.S.

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[5] For more information, see <http://www.nano.gov>.
[6] For an example, see <http://es.epa.gov/ncer/rfa/2005/2005_star_nano.html>.
[7] For more information, see <http://www.climatescience.gov/>.
[8] For more information, see <http://www.epri.com/>.

The Agency coordinates its research fellowship programs with other Federal agencies and the nonprofit sector through the National Academies' Fellowships Roundtable, which meets biannually.[9]

EPA coordinates its research on endocrine disruptors with other Federal agencies through the interagency working group on endocrine disruptors under the auspices of the Toxics and Risk Subcommittee of the CENR. EPA coordinates its biotechnology research through the interagency biotechnology research working group and the agricultural biotechnology risk analysis working group of the Biotechnology Subcommittee of NSTC's Committee on Science.

Goal 5-Compliance and Environmental Stewardship

Objective: Improve Compliance

The Enforcement and Compliance Assurance Program coordinates closely with DOJ on all enforcement matters. In addition, the program coordinates with other agencies on specific environmental issues as described herein.

The Office of Enforcement and Compliance Assurance (OECA) coordinates with the Chemical Safety and Accident Investigation Board, OSHA, and Agency for Toxic Substances and Disease Registry in preventing and responding to accidental releases and endangerment situations, with the BIA on Tribal issues relative to compliance with environmental laws on Tribal Lands, and with the SBA on the implementation of the Small Business Regulatory Enforcement Fairness Act (SBREFA). OECA also shares information with the IRS on cases which require defendants to pay civil penalties, thereby assisting the IRS in assuring compliance with tax laws. In addition, it coordinates with the SBA and a number of other Federal agencies in implementing the Business Gateway initiative, an "E-Government" project in support of the President's Regulatory Management Agenda. OECA also works with a variety of Federal agencies including the DOL and the IRS to organize a Federal Compliance Assistance Roundtable to address cross cutting compliance assistance issues. Coordination also occurs with the COE on wetlands.

Due to changes in the Food Security Act, the USDA/NRCS has a major role in determining whether areas on agricultural lands meet the definition of wetlands and are therefore regulated under the CWA. Civil Enforcement coordinates with USDA/NRCS on these issues also. The program coordinates closely with the USDA on the implementation of the Unified National Strategy for Animal Feedlot Operations. EPA's Enforcement and Compliance Assurance Program also 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. Coordination also occurs with Customs and Border Protection on implementing the secure International Trade Data System across all Federal agencies, and on pesticide imports. EPA and the FDA share jurisdiction over general-purpose disinfectants used on non-critical surfaces and some dental and medical equipment surfaces (e.g., wheelchairs). The Agency has entered into a MOU with HUD concerning lead poisoning.

[9] For more information, see <http://www7.nationalacademies.org/fellowships/roundtable.html>.

The Criminal Enforcement Program coordinates with other Federal law enforcement agencies (i.e., FBI, Customs, DOL, U.S. Treasury, USCG, DOI and DOJ) and with state and local law enforcement organizations in the investigation and prosecution of environmental crimes. EPA also actively works with DOJ to establish task forces that bring together Federal, state and local law enforcement organizations to address environmental crimes. In addition, the program has an Interagency Agreement with the DHS 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. The Homeland Security and Forensics Support Programs also coordinate with other Federal law enforcement agencies and with state and local law enforcement organizations to support counter-terrorism efforts.

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, local, and Tribal governments to ensure compliance by Federal agencies with all environmental laws. In FY 2009, EPA will also continue working with other Federal agencies to support the Federal Facilities Stewardship and Compliance Assistance Center (www.fedcenter.gov).

OECA collaborates with the states and Tribes. States perform the vast majority of inspections, direct compliance assistance, 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 does not seek approval of a program, EPA must implement that program in the state. Historically, the level of state approvals has increased as programs mature and state capacity expands, with many of the key environmental programs approaching approval in nearly all states. EPA will increase its effort to coordinate with states on training, compliance assistance, capacity building and enforcement. EPA will continue to enhance the network of state and Tribal compliance assistance providers.

The Office of Enforcement and Compliance Assurance chairs the Interagency Environmental Leadership Workgroup established by Executive Order 13148. The Workgroup consists of over 100 representatives from most Federal departments and agencies. Its mission is to assist all Federal agencies with meeting the mandates of the Executive Order, including implementation of environmental management systems and environmental compliance auditing programs, reducing both releases and uses of toxic chemicals, and compliance with pollution prevention and pollution reporting requirements. In FY 2009, the OECA will work directly with a number of other Federal agencies to improve CWA compliance at Federal facilities. OECA and other agencies will jointly investigate the underlying causes of persistent CWA violations and design and implement fixes to the problems to keep facilities in compliance over the long term. OECA anticipates that FY 2009 will see the completion of a multiple-year partnership with the Veterans Health Administration (VHA), a part of the Department of Veterans Affairs (VA). OECA and the VHA formed the partnership in 2002 to improve compliance at VHA medical centers across the nation. Since then, EPA and VHA have jointly designed and begun implementing environmental management systems at all VHA medical centers, completed multi-day onsite reviews at more than 20 medical centers to assess the strengths and weaknesses of their

environmental programs and to guide the VHA in making program improvements at all its medical centers, and delivered multiple environmental compliance courses for VHA staff and managers.

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 Bureau of Customs and Border Protection, the Fish and Wildlife Service, the Department of Justice, and the States of Arizona, California, New Mexico, and Texas. EPA is the lead agency and coordinates U.S. participation in the CEC. EPA works with NOAA, the Fish and Wildlife Service and the U.S. Geological Survey on CEC projects to promote biodiversity cooperation, and with the Office of the U.S. Trade Representative to reduce potential trade and environmental impacts such as invasive species.

The Agency is required to review environmental impact statements and other major actions impacting the environment and public health proposed by all Federal agencies, and make 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. EPA does have authority under these statutes to refer major disagreements with other Federal agencies to the Council on Environmental Quality. 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 the Federal Highway Administration and Federal Aviation Administration), U.S. Army Corps of Engineers, Department of Interior (including Bureau of Land Management, Minerals Management Service and National Parks Service), Department of Energy (including Federal Regulatory Commission), and Department of Defense.

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Objective: Improve Environmental Performance through Pollution Prevention and Innovation

EPA is involved in a broad range of pollution prevention (P2) activities which can yield reductions in waste generation and energy consumption in both the public and private sectors. For example, the EPP initiative, which implements Executive Orders 12873 and 13101, promotes the use of cleaner products by Federal agencies. This is aimed at stimulating demand for the development of such products by industry.

This effort includes a number of demonstration projects with other federal Departments and agencies, such as the NPS (to use Green Purchasing as a tool to achieve the sustainability goals of the parks), DoD (use of environmentally preferable construction materials), and Defense Logistics Agency (identification of environmental attributes for products in its purchasing system). The program is also working within EPA to "green" its own operations. The program also works with NIST to develop a life-cycle based decision support tool for purchasers.
Under the Suppliers' Partnership for the Environment program and its umbrella program, the GSN, EPA's P2 Program is working closely with NIST and its Manufacturing Extension Partnership Program to provide technical assistance to the process of "greening" industry supply chains. The EPA is also working with the DOE's Industrial Technologies Program to provide energy audits and technical assistance to these supply chains.

EPA is working with DOE and USDA to develop a "Biofuels Posture Plan," the first step in implementing a Biofuels Initiative to support the goals of the President's Advanced Energy Initiative. The Biofuels Posture Plan will be designed to promote the development of a biofuels industry in the U.S. to help shift the country towards clean, domestic energy production and away from dependence on foreign sources of energy (mostly petroleum). EPA is investigating the use of municipal and industrial solid and hazardous wastes as sources of biomass that can be used to produce clean biofuels. EPA is promoting specific waste-to-energy technologies through policy development, research, and, where feasible, regulatory change.

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EPA and DOI are coordinating an Interagency Tribal Information Steering Committee that includes the Bureau of Reclamation, DOE, HUD, USGS, Federal Geographic Data Committee, BIA, Indian Health Service, Department of the Treasury, and DOJ. 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. EPA is developing protocols with the Indian Health Service Sanitation Facilities

Construction Program for integration of databases of the two agencies, within the framework of the Tribal Enterprise Architecture.

EPA has organized a Tribal Data Working Group under the Federal Geographic Data Committee, and, along with BIA, is the co-chair of this group. EPA will play a lead role in establishing common geographic data and metadata standards for Tribal data, and in establishing protocols for exchange of information among Federal, non-Federal and Tribal cooperating partners.

EPA is developing protocols with the Bureau of Reclamation, Native American Program, for integration of databases of the two agencies, within the framework of the Tribal Enterprise Architecture. EPA is also developing agreements to share information with the Alaska District, COE.

To promote mutual goals as leadership programs with industry, the Office of Policy, Economics, and Innovation (OPEI) through its National Environmental Performance Track, works with the Voluntary Protection Programs (VPP) in the Occupational Safety and Health Administration (OSHA). EPA and OSHA collaborate in developing incentives for members, identifying potential members, providing joint recognition, and sharing best practices from their experience in managing leadership programs.

Under a MOU, EPA and NPS established a partnership to share resources for promoting environmental management system approaches that are good for both the environment and business. The MOU promotes the implementation of cost-effective environmental management practices for businesses in the tourism industry, including the approximately 600 NPS concessionaires that provide various visitor services in more than 130 national parks.

Information on regulations and other issues that may have an adverse impact on small businesses is shared regularly with the Small Business Administration's Office of Advocacy. An ongoing activity includes the coordination of interactions among the Office of Air and Radiation, the State Small Business Assistance Program's National Steering Committee, and the Office of Advocacy in the development of the proposed 55 area source Maximum Achievable Control Technology (MACT) rules that will impact small businesses and state programs.

The Sector Strategies program addresses issues that directly affect the environmental performance of selected industries and other sectors of the economy. At times, actions taken to enhance sector-wide performance involve other Federal agencies. This work tends to be informal and issue-specific, as opposed to formal inter-agency partnerships. For example, previous work on Agribusiness sector issues involved the Natural Resource Conservation Service of the USDA. Energy conservation work with the Metal Foundry sector involved the DOE's innovative technologies program. In 2005, Port sector stakeholders include the U.S. Maritime Administration (DOT), COE and NOAA. Data work with the Cement sector involves USGS contacts. And future "green highway" work of the Construction Sector may involve the FHWA.

Activities associated with the Environmental Education Program are coordinated with other Federal agencies in a variety of ways:

EPA currently funds approximately $1.5M for eight interagency agreements with four Federal agencies. Current projects are focused on helping these agencies to better coordinate their environmental education efforts (see www.handsontheland.org) and improving capacity to measure environmental education program outcomes. All of the activities are funded jointly by the cooperating Federal agency and a third non-profit partner. Detailed information about the interagency agreements is available at http://www.epa.gov/enviroed/iag.html.

EPA chairs the Task Force on Environmental Education which meets periodically to share information. The current focus involves sharing information on linking environmental education programs to the strategic planning initiatives of Federal agencies and developing program impact measures.

EPA, in partnership with Department of Education, the Agency for Toxic Substances and Disease Registry, the Department of Interior, the Bureau of Indian Affairs, the Consumer Product Safety Commission, and the Centers for Disease Control, is implementing a national Schools Chemical Cleanout Campaign (SC3). SC3 is building a national public/private network that will facilitate the removal of dangerous and inappropriate chemicals from K - 12 schools; encourage responsible chemical management practices to prevent future chemical accidents and accumulations; and raise issue awareness.

As a participant on the following interagency workgroups, EPA remains informed of related efforts across the government and provides coordination assistance as necessary: The Interagency Committee on Education (Chair: Department of Education); Partners in Resource Education (Chair: National Environmental Education and Training Foundation); the Federal Interagency Committee on Interpretation (Chair: National Park Service); Ocean Education Task Force (workgroup of the U.S. Ocean Commission); and the Afterschool.gov (Chair: General Services Administration).

EPA coordinates U.S. participation in the activities of the North American Commission on Environmental Cooperation (CEC) on green purchasing, supply chains, and buildings.

EPA's web portal of all Federal environmental education program web sites is: http://www.epa.gov/enviroed/FTFmemws.html.

Objective: Improve Human Health and the Environment in Indian Country

In 2007, EPA completed two important tribal infrastructure Memoranda of Understanding (MOU) by five federal agencies. EPA, the Department of the Interior, Department of Health and Human Services, Department of Agriculture, and the Department of Housing and Urban Development committed to work as partners to improve infrastructure on tribal lands and focus efforts on providing access to safe drinking water and basic wastewater facilities to tribes.

The first MOU promotes coordination between federal tribal infrastructure programs and financial services while allowing department programs to retain their unique advantages. It is fully expected that the efficiencies and partnerships resulting from this collaboration will directly assist tribes with their infrastructure needs. For the first time five federal departments have joined together and agreed to work across traditional program boundaries on tribal infrastructure issues. The second MOU signed by the parties was created under this authority and addresses the issue of access to safe drinking water and wastewater facilities on tribal lands. For more information, please see the web link: http://www.epa.gov/tribalportal/mous.htm.

Objective: Enhance Science and Research

EPA is coordinating with DoD's Strategic Environmental Research and Development Program (SERDP) in an ongoing partnership, especially in the areas of sustainability research and of incorporating materials lifecycle analysis into the manufacturing process for weapons and military equipment. EPA's People, Prosperity, and Planet (P3) student design competition for sustainability will partner with NASA, NSF, OFEE, USAID, USDA, CEQ, and OSTP. EPA is continuing its partnerships with NSF, NIEHS, AND NIOSH on jointly issued grant solicitations for nanotechnology, and its coordination through the NSET with all agencies that are part of the NNI.

EPA will continue work under the MOA with the USCG and the State of Massachusetts on ballast water treatment technologies and mercury continuous emission monitors. The agency also coordinates technology verifications with NOAA (multiparameter water quality probes); DOE (mercury continuous emission monitors); DoD (explosives monitors, PCB detectors, dust suppressants); USDA (ambient ammonia monitors); Alaska and Pennsylvania (arsenic removal); Georgia, Kentucky, and Michigan (storm water treatment); and Colorado and New York (waste-to-energy technologies).

Coordination with Other Federal Agencies

Enabling Support Programs

Office of the Administrator (OA)

EPA collaborates with other Federal agencies in the collection of economic data used in the conduct of economic benefit-cost analyses of environmental regulations and policies. The Agency collaborates with the Department of Commerce's Bureau of the Census on the Pollution Abatement Costs and Expenditure (PACE) survey in order to obtain information on pollution abatement expenditures by industry. In our effort to measure the beneficial outcomes of Agency programs, we co-sponsor with several other agencies the U.S. Forest Service's National Survey on Recreation and the Environment (NSRE), which measures national recreation participation and recreation trends. EPA also collaborates with other natural resource agencies (e.g., United States Department of Agriculture (USDA), Department of Interior, Forest Service, National Oceanic Atmospheric Administration (NOAA)) to foster improved interdisciplinary research and reporting of economic information by collaboratively supporting workshops and symposiums on environmental economics topics (ecosystem valuation resource evaluation); economics of invasive species; and measuring health benefits.

The Agency also continues to work with other Federal agencies in the development of children's environmental health indicators used to monitor the outcomes of children's health efforts. The Agency collaborates with the Centers for Disease Control and Prevention and the National Center for Health Statistics to obtain approval of the Federal Interagency Forum on Child and Family Statistics (www.childstats.gov) on the reporting of appropriate children's health indicators and data. Furthermore, the Agency is an active member of the Interagency Forum on Aging-Related Statistics (www.agingstats.gov). The Forum was created to foster collaboration among Federal agencies that produce or use statistical data on the older population. The biannual chartbook contains an indicator on air quality and the counties where older adults reside that have experienced poor air quality.

EPA's Office of Homeland Security (OHS) continues to focus on broad, Agency and government-wide homeland security policy issues that cannot be adequately addressed by a single program office, as well as ensuring implementation of EPA's Homeland Security Strategy. A significant amount of the responsibilities require close coordination with Federal partners, through Policy Coordinating Committees (PCCs), briefings and discussions with individual senior Federal officials. The Associate Administrator for Homeland Security and OHS represent the Administrator, Deputy Administrator, and other senior Agency officials at meetings with personnel from the White House and Department of Homeland Security (DHS), and other high-level stakeholders. OHS coordinates the development of responses to inquiries from the White House, DHS, the Congress, and others with oversight responsibilities for homeland security efforts. EPA's ability to effectively implement its broad range of homeland security responsibilities is significantly enhanced though these efforts. OHS ensures consistent development and implementation of the Agency's homeland security policies and procedures,

while building an external network of partners so that EPA's efforts can be integrated into, and build upon, the efforts of other Federal agencies.

The Science Advisory Board (SAB) primarily provides the Administrator with independent peer reviews and advice on the scientific and technical aspects of environmental issues to inform the Agency's environmental decision-making. Often, the Agency program office seeking the SAB's review and advice has identified the Federal agencies interested in the scientific topic at issue. The SAB coordinates with those Federal agencies by providing notice of its activities through the Federal Register, and as appropriate, inviting Federal agency experts to participate in the peer review or advisory activity. The SAB, from time to time, also convenes science workshops on emerging issues, and invites Federal agency participation through the greater Federal scientific and research community.

EPA's Office of Small and Disadvantaged Business Utilization (OSDBU) works with the Small Business Administration (SBA) and other Federal agencies to increase the participation of small and disadvantaged businesses in EPA's procurement of goods, services, equipment, and construction. OSDBU works with the SBA to develop EPA's goals for contracting with small and disadvantaged businesses; address bonding issues that pose a roadblock for small businesses in specific industries, such as environmental clean-up and construction; and address data-collection issues that are of concern to OSDBUs throughout the Federal government. EPA's OSDBU works closely with the Center for Veterans Enterprise and EPA's Regional and program offices to increase the amount of EPA procurement dollars awarded to Service-Disabled Veteran-Owned Small Businesses (SDVOSB). It also works with the Department of Education and the White House Historically Black College and University (HBCU) Workgroup to increase opportunities for HBCUs to partner with small businesses and Federal agencies, especially in the area of scientific research and development. Work is also coordinated with the Minority Business Development Agency to fund opportunities for small disadvantaged businesses, and to collaborate to provide outreach to small disadvantage businesses and Minority-Serving Institutions throughout the United States and the trust territories. EPA's OSDBU Director is an active participant in the Federal OSDBU Council (www.osdbu.gov), and served as the Council's Chairperson in FYs 2004 and 2006. The OSDBU Directors collaborate to the extent possible to support major outreach efforts to small and disadvantaged businesses, SDVOSB, and minority-serving educational institutions via conferences, business fairs, and speaking engagements.

Office of the Chief Financial Officer (OCFO)

EPA makes active contributions to standing interagency management committees, including the Chief Financial Officers Council and the Federal Financial Managers' Council. These groups are focused on improving resources management and accountability throughout the Federal government. EPA also coordinates appropriately with Congress and other Federal agencies, such as Department of Treasury, Office of Management of Budget (OMB), and the Government Accountability Office (GAO).

Office of Administration and Resources Management (OARM)

EPA is committed to working with Federal partners that focus on improving management and accountability throughout the Federal government. The Agency provides leadership and expertise to government–wide activities in various areas of human resources, grants administration, contracts management and Homeland Security. These activities include specific collaboration efforts with Federal agencies and departments through:

- Chief Human Capital Officers, a group of senior leaders that discuss human capital initiatives across the Federal government; and

- Legislative and Policy Committee, a committee comprised of other Federal agency representatives who assist Office of Personnel and Management in developing plans and policies for training and development across the government.

- The Chief Acquisition Officers Council, the principal interagency forum for monitoring and improving the Federal acquisition system. The Council also is focused on promoting the President's Management Agenda in all aspects of the acquisition system, as well as the President's specific acquisition-related initiatives and policies.

The Agency is participating in government-wide efforts to improve the effectiveness and performance of Federal financial assistance programs, simplify application and reporting requirements, and improve the delivery of services to the public. This includes membership on the Grants Policy Committee, the Grants Executive Board, and the Grants.gov Users Group. EPA also participates in the Federal Demonstration Partnership to reduce the administrative burdens associated with research grants.

EPA is working with the OMB, General Services Administrations, and Department of Commerce's National Institute of Standards and Technology to implement Homeland Security Presidential Directive No. 12 - Policy for a Common Identification Standard for Federal Employees and Contractors.

Office of Environmental Information (OEI)

To support EPA's overall mission, OEI collaborates with a number of other Federal agencies and state and Tribal governments on a variety of initiatives, including initiatives to make government more efficient and transparent, protect human health and the environment, and assist in homeland security. OEI is more specifically involved in the information technology (IT), information management (IM), and information security aspects of the projects it collaborates on.

EPA is the managing partner agency of the eRulemaking Program, one of the President's 25 government-wide Electronic Government (E-Gov) initiatives. The eRulemaking Program is operated within OEI. The Program's mission is to improve public access to, understanding of, and participation in regulation development and to streamline government's management of and

efficiency in promulgating regulations. In January 2003, eRulemaking launched the award-winning *Regulations.gov* web site. For the first time ever, citizens could access and comment on all proposed Federal regulations *from a single web site*. Tens of millions of public users have come to this site to find, view, and comment on proposed regulations. In September 2005, the eRulemaking Program launched the award-winning Federal Docket Management System (publicly accessible at www.regulations.gov). The Federal Docket Management System is an electronic document repository enabling agencies to post all rulemaking and non-rulemaking documents for public access and comment. Now the public also can access Federal Register documents, supporting technical/legal/economic analyses, and public comments previously only available by physically visiting a docket center. EPA and its partner agencies enhance the system each quarter by incorporating new capabilities for public and agency users, including: the ability to bookmark documents, email notification, Real Simple Syndication Feed (RSS), eAuthenticated login, electronic records, full-text search, and the ability for major search engines to locate documents within Regulations.gov. The eRulemaking Program has migrated more than 29 Departments and Independent Agencies, comprised of 161 bureaus, boards, agencies and administrations, representing more than 90% of the Federal rules promulgated annually. Collectively, this collaborative multi-agency effort is projected to result in significant savings to the Federal government through the elimination of duplicative systems (whether existing or proposed).

As part of its effort to help protect human health and the environment, EPA is coordinating with the states and tribes to improve the collection, management, and sharing of environmental information. A key component of these efforts is EPA's participation in the State/EPA Information Management Workgroup and Network Steering Board. As a member of the Board, EPA participates in action teams comprised of EPA, state, and Tribal members, designed to identify information projects that can resolve information issues and to arrive at consensus solutions. Two of the areas that this forum has worked on extensively are developing environmental data standards and implementing new technologies for collecting and reporting information.

In addition to protecting human health and the environment, EPA also supports homeland security by coordinating extensively with a number of other Federal agencies to develop and expand the use of geographically based information. These efforts include coordination with the U. S. Geological Survey (USGS), Federal Geographic Data Committee, Chief Information Officer (CIO) Council (http://www.cio.gov), DHS, Council on Environmental Quality, Environmental Council of States, other national security agencies, and state agencies. Much of this work is done by multi-agency workgroups designed to ensure consistent implementation of standards and technologies across the Federal government to support efficient sharing of data, especially the sharing of geographically based data and Geographic Information Systems. A key aspect of this work is developing and implementing the infrastructure to support an assortment of national spatial data – data that can be attached to and portrayed on maps. This work has several key applications, including ensuring that human health and environmental conditions are represented in the appropriate contexts, supporting the assessment of environmental conditions and changes, and supporting first responders and other homeland security situations. Additionally, EPA coordinates with the CIO Council and other Federal agencies on projects

related to information security, capital planning, workforce development, interoperability, and infrastructure related to homeland security.

Another area where EPA actively coordinates with other Governmental entities is public access to information. In addition to the E-Gov initiatives described above, EPA also coordinates with the USGS, Bureau of Indian Affairs, Fish and Wildlife Service, and state and local government partners to expand and improve public access to information affecting their lives. EPA also works with states, tribes, local agencies, and non-governmental organizations to design and implement specific community-based information projects.

Office of the Inspector General (OIG)

The EPA Inspector General is a member of the President's Council on Integrity and Efficiency (PCIE), an organization comprised of Presidentially-appointed Federal Inspectors General (IG), GAO, and the Federal Bureau of Investigation (FBI). The PCIE coordinates and improves the way IGs conduct audits, investigations and internal operations. The PCIE also promotes joint projects of government-wide interest, and reports annually to the President on the collective performance of the OIG community. The OIG Special Operations Division coordinates computer crime activities with other law enforcement organizations such as the FBI, Secret Service and Department of Justice. In addition, the OIG participates with various inter-governmental audit forums and professional associations to exchange information, share best practices, and obtain/provide training. The OIG further promotes collaboration among EPA's partners and stakeholders in the application of technology, information, resources and law enforcement efforts through its outreach activities. The EPA OIG initiates and participates in individual collaborative audits, evaluations and investigations with OIGs of agencies with an environmental mission such as the Departments of Interior and Agriculture, and with other Federal, state, and local law enforcement agencies as prescribed by the IG Act, as amended. The OIG also promotes public awareness of opportunities to report possible fraud, waste and abuse through the OIG Hotline.

MAJOR MANAGEMENT CHALLENGES

Introduction

Management challenges represent potential vulnerabilities in program operations and susceptibilities to fraud, waste, abuse, and mismanagement. The Reports Consolidation Act of 2000 requires the Inspector General to identify the most serious management challenges facing EPA, briefly assess the Agency's progress in addressing them, and report annually. EPA has established a mechanism for identifying and addressing its key management challenges before they become serious problems. As part of its management integrity process, EPA senior managers meet with representatives from EPA's Office of Inspector General (OIG), the General Accountability Office (GAO), and the Office of Management and Budget (OMB) to hear their views on EPA's key management challenges. EPA managers also use audits, reviews, and program evaluations conducted internally and by GAO, OMB, and OIG to assess program effectiveness and identify potential management issues.

EPA remains committed to maintaining effective and efficient internal controls to ensure that program and financial activities are carried out effectively and according to applicable laws and sound management policy. The discussion that follows lists management challenges that OIG, GAO, and OMB have identified and summarizes actions EPA is taking to address these issues.

1. Emission Factors for Sources of Air Pollution

Scope of Challenge: *While the Agency has made some progress in improving its emission factors (e.g., developing a Quality Management Plan), challenges remain. A 2006 OIG evaluation found (1) conflicting guidance on appropriately using emissions factors, (2) a rating system that did not quantify the uncertainty associated with emissions factors, (3) inadequate funding of the program, and (4) the lack of a comprehensive plan to improve data collection and set priorities, and OIG concluded that emissions factors are being used inappropriately for key environmental decisions. EPA needs to address the large number of emission factors rated low, ensure sufficient funding to address data gaps and limitations, limit decisions being made with poor quality emissions factors, and provide industry and state or local agencies with significant non-regulatory incentives to obtain the data needed to improve emissions factors. (OIG)*

The Agency has made significant progress in addressing the issues identified in OIG's March 2006 evaluation report, *EPA Can Improve Emissions Factors Development and Management.* EPA remains on track in implementing its plan to make it easier for others to transmit and transform their emissions data into emissions factors that account for uncertainty. Building on previous success, the Agency continues to re-engineer the emissions factor program to develop emissions factors faster, increase the number of emission factors, and account for uncertainty in emissions factors.

With respect to developing guidance for using emissions factors, EPA agrees that the Agency needs to be clearer about the regulatory and environmental risks of using emissions factors, including the risks associated with their original intended application and for programs that have adopted their use as an expeditious means of achieving their goals. The Agency has developed a

new, streamlined emissions factor development process that is currently undergoing public review, and we expect to finalize these new procedures later this year.

In response to OIG's finding that the current emissions factor rating system did not quantify the uncertainty associated with emissions factors, the Agency has completed a statistical study of the uncertainty associated with published emissions factors that are based on emissions testing data, such as those contained in AP-42. We presented our approach and study results to internal reviewers and a panel of expert peer reviewers and addressed their comments and suggestions. In February 2007, EPA submitted a report describing the technical approach and the results to Congress and OMB. The report is currently available on the web for public review and comment. EPA is now beginning to analyze various policy options available for accounting for uncertainty.

The OIG has recommended the development of a comprehensive plan to improve data collection and set emission factor priorities. We have developed and submitted a comprehensive strategic plan meeting those recommendations, which is currently under review by OIG. The plan focuses on advancing direct, continuous site-specific measurements of the pollutant of concern and addresses the development and use of emissions factors for situations where site-specific measurements are infeasible or the risks of adverse program decisions are unacceptable.

Highlights of progress include:

- Launched WebFIRE, an interactive website that combines AP-42 and FIRE data so that users are no longer required to conduct independent checks while searching for emission factors.
- Conducted an analysis to determine the uncertainty of highly-rated emissions factors.

Plans for further improvements include:

- Enhance WebFIRE to allow users independently to check and verify background information for emissions factors.
- Develop emissions factors for coke ovens, landfills, municipal waste combustors, steel mini-mills, landing losses for external floating roofs, and low pressure petroleum storage tanks.
- Initiate development of emissions factors for natural gas engines, rubber manufacturers, and animal feeding operations.

2. Voluntary Climate Change Program/ Voluntary Climate Change Programs Greenhouse Gas (GHG) Reporting

Scope of Challenge: *Climate Leaders and Climate VISION, two voluntary programs aimed at securing private sector agreements to voluntarily reduce greenhouse gas emissions or emissions intensity, need to be better managed to achieve desired results. While many participants have completed program steps in a timely manner, some participants appear not to be progressing at the rate expected. GAO recommends that EPA develop written policies establishing the consequences for not completing program steps on schedule. OMB is concerned about the reliability of the estimates of GHG reduction attributable to voluntary programs such as Energy Star. (GAO and OMB)*

In its April 2006 report on climate change, GAO recommended that EPA develop written policy for increasing progress under the EPA Climate Leaders program. EPA believes GAO's recommendation was addressed in the initial design of the program. The Agency has detailed its existing policy in an internal memorandum which documents the steps that EPA will take if it believes a participant is not completing the program requirements in a timely manner. When EPA believes a participant is not making a good faith effort to complete program requirements, the Agency will telephone the participant to re-invigorate the process; send an official letter urging the participant to act more expeditiously; and, if necessary, remove the participant from the program for noncompliance. EPA will continue to monitor participants' progress through its program tracking system, which includes a goal tracking spreadsheet and inventory of calls conducted to discuss progress.

In response to OMB's concerns about the reliability of the estimates of GHG, a recent Program Assessment Rating Tool review found EPA's climate programs to be achieving their goals. The review also highlighted the ENERGY STAR program as among the more successful in collecting and presenting performance information and using the data for management decision making. EPA publishes an annual report on the accomplishments of its voluntary programs for reducing GHG emissions. This report outlines EPA's robust methods to estimate the benefits of these programs and explains how the Agency is addressing evaluation issues. The report shows that ENERGY STAR, in particular, relies on robust, peer-reviewed methods.

Highlights of progress include:

- Developed new peer-reviewed methods for documenting the benefits of ENERGY STAR, including energy savings and GHG reductions.

Plans for further improvements include:

- Continue to assess the progress of Climate Leader partners and request that they leave the program if they are not making sufficient progress in a reasonable period of time.
- Improve the methods that EPA employs to assess the impacts of its climate protection programs.
- Participate in interagency efforts to assess and report on the impacts of the federal climate protection policy and program.
- Review recent legislation, including the Energy Independence and Security Act of 2007 and the Fiscal Year 2008 Omnibus Appropriations Act, to determine the impacts of their provisions on EPA's methods for estimating the benefits of these programs.

3. Capacity to Manage Climate Change Activities

Scope of Challenge: *Recent developments in climate change science and policy (e.g., Massachusetts vs. EPA) will affect EPA's ability to protect public health and the environment. GAO believes EPA could benefit from assessing its capacity to manage climate change issues and the impact of a changing climate on existing Agency programs. EPA should evaluate its scientific and technical capacity to interpret scientific findings and incorporate them into regulatory decisions; assess its capacity to implement mandatory programs should Congress pass binding climate*

legislation; and review the administration of existing programs (air and water pollution) to determine implications of a changing climate on the Agency's ongoing regulatory efforts. (GAO)

EPA agrees that recent developments in climate change science and policy will impact the Agency's programs and capacity needs. While we have already begun the type of management and resource analyses recommended by GAO, we believe it is premature to conduct a full assessment at this time, given the uncertainty of future Congressional actions. The scope of possible future legislation under development is unknown (e.g., there is not yet consensus regarding the sectors to be covered by a possible policy or the type of "binding" measure to be used). Moreover, it is unclear when such legislation will pass and what kind of lead time EPA would have in terms of implementing the enacted policies. Under the circumstances, EPA believes Agency resources could be better used to track developments in Congress and provide technical support and analyses as requested.

Highlights of progress include:

- Completed short-term realignment of resources to respond to the Massachusetts v. EPA decision and the President's subsequent Executive Order to regulate GHG emissions from motor vehicles.
- With extensive senior management involvement, continue to assess the implications of Supreme Court decisions.

Plans for further improvements include:

- Continue to identify the potential air quality and climate policy implications of research on air programs.

4. Challenges in Addressing Air Toxic Regulatory Programs Goals

Scope of Challenge: *OMB believes EPA needs to continue focusing on addressing the backlog of residual risk standards and developing air toxics exposure data. (OMB)*

The 1990 Amendments to the Clean Air Act (CAA) required EPA to develop and issue Maximum Achievable Control Technology (MACT) standards to reduce emissions of air toxics from certain categories of stationary sources. EPA completed its obligation to develop initial MACT standards (96 standards for 174 source categories) in 2004. EPA anticipates that when fully implemented in 2007, the MACT standards will reduce air toxics emissions from stationary sources by 1.7 million tons per year. The CAA also requires EPA to evaluate air toxic emissions further and evaluate whether post-MACT emissions pose a risk to public health. These residual risk reviews and standards are to be developed for each source category within 8 years of promulgation of the MACT standard. In addition to the residual risk reviews, the CAA requires EPA to conduct technology reviews for each MACT standard within 8 years of promulgation. For each technology review EPA is to review and revise the MACT standard, if necessary, taking into account developments in practices, processes and control technologies.

EPA is combining the risk and technology reviews for each MACT standard. The Agency has completed risk and technology reviews for 8 MACT standards to date under consent decree orders. Sierra Club filed a notice of intent to sue on 17 additional MACT standards, and we are now beyond the 8 years for an additional 16 for a total of 33 MACT standards.

EPA has developed a new approach of streamlining the risk and technology reviews for the MACT standards. Under the new risk and technology review EPA will perform the risk and technology reviews for groups of MACT standards rather than individually. Post-MACT emissions contained in the NEI database will be used as the basis to model risk. To conduct risk analyses, data will be reviewed by EPA and supplemented with additional data for the source category. EPA will then solicit public comment on the data and any anomalies noted to obtain the best representation of emissions from the source category. Through the residual risk and technology review (RTR) process, EPA believes it can complete the residual risk standards in a timely, scientifically creditable and cost-effective manner.

Highlights of progress include:

- Completed 6 residual risk and technology reviews.
- Completed the Halogenated Solvents Residual Risk Rule.
- Developed datasets for each source category from NEI and risk data.
- Performed screening assessments for 34 MACT standards (50 source categories).
- Completed the Halogenated Solvents Residual Risk Rule.
- Published advanced notice of proposed rulemaking (currently reviewing comments and adding corrections to the datasets).

Plans for further improvements include:

- Continue to conduct residual risk reviews and rules under RTR process in an accelerated manner.

5. Efficiently Managing Water and Wastewater Resources and Infrastructure/Clean Water and Drinking Water State Revolving Funds

Scope of Challenge: *The Agency faces a continuing challenge in reaching thousands of small utilities and influencing their management behavior, skills, and abilities. EPA needs to be more innovative on the finance and management fronts to assist states and communities in overcoming infrastructure issues. The Agency also needs to define its role as part of a long-term national strategy on sustainable water infrastructure that addresses financial and management issues. OIG questions whether EPA's "Four Pillars of Sustained Infrastructure" approach adequately addresses the infrastructure challenge. OMB and OIG agree that EPA's regulation policy on state match options should no longer allow states to use bonds repaid from SRF to meet state match requirements. (OIG and OMB)*

EPA believes it has taken and will continue to take effective steps to define and pursue its role in ensuring that the nation's water and wastewater infrastructure is sustainable in the future. While much of the change is needed at the local level, EPA provides leadership, tools, innovation, and momentum to encourage a shift toward financial and managerial sustainability. The Agency's role is to provide education and outreach and to serve as a "wholesaler" of information to our state and national professional association partners. EPA's Four Pillars of Sustainable Infrastructure (SI) have provided the structure to define the sustainability challenge, raised the visibility of the issue to a national scale, and offered a suite of approaches to move towards sustainability. Water infrastructure has been further elevated on the national stage as one of the Administrator's top four priorities.

EPA is leading by example by breaking down barriers to progress in its own programs and partnerships and working toward policies that foster sustainability, while protecting human health and the environment. Internally, EPA is speaking with one voice—reaching across offices to promote the innovation needed to address the sustainability challenge. SI has been a major topic for the national Water Division Directors' and SES meetings, helping the Agency work across traditional organizational lines to allow and promote innovation. The Agency is promoting SI through permits, Special Environmental Projects, and injunctive relief. The Agency is also coordinating efforts in its Performance Track and Smart Growth programs to foster aspects of sustainability, energy, and infrastructure related to climate change.

EPA's efforts go well beyond the areas of focus under the Four Pillars. In the area of innovative finance, the Agency is working to allow the expanded use of Private Activity Bonds to bring more private capital into the sector and exploring and promoting innovative uses of SRF loans. In March 2007, in partnership with 14 other organizations, EPA convened a national conference on Paying for Sustainable Water Infrastructure that brought stakeholders from all levels of government and the private sector together to explore creative methods of paying for sustainable water infrastructure. Four conference tracks covered topics related to reducing costs and increasing investment in drinking water and wastewater systems and programs. The conference looked beyond the Four Pillars to broader issues and expanding all stakeholders' efforts, since solutions to the sustainability challenge will require joint and collaborative effort. EPA has since met with conference co-sponsors to consolidate learning and define critical areas for additional collaborative action, such as improved outreach to local officials.

On July 2, 2007, EPA responded to OIG's audit recommendations and agreed to assess the effects on states of its state match bond policy and the potential impact of changes to the current policy. Our assessment indicates that states show near unanimous support for the current policy and believe that its cumulative effect on the SRF program has been highly beneficial. Some states that take advantage of the current policy believe they would be unable to procure state appropriations for match, and therefore unable to apply for federal funds. EPA will continue to work with the OIG and states to analyze the effects of this policy.

Highlights of progress include:

- Launched WaterSense, a market enhancement program that is increasing national awareness of water-efficient choices and the value of clean and safe water.
- Signed a ground-breaking agreement with six major water and wastewater associations jointly to promote effective utility management based on a series of *Attributes of Effectively Managed Utilities,* other management tools, and utility performance measures.
- Co-sponsored the Water Quality Trading Conference with USDA that brought utility companies and the agricultural community together to build momentum for trading programs that maximize impact from infrastructure investments.
- Continued to produce assistance documents and tools targeting the needs and special circumstances of small utilities (e.g., Simple Tools for Effective Performance and Total Electronic Asset Management Software).

- Convened a *Watershed Forum* with several major utilities to discuss ways to promote adoption of various watershed tools, such as green infrastructure, into local infrastructure decisions.
- Convened a panel of experts to discuss the importance of full cost pricing of water and wastewater services by utilities.
- Co-sponsored the *Paying for Sustainable Water Infrastructure: Innovations for the 21st Century Conference* which brought together stakeholders from all levels of government and the private sector to explore creative methods for paying for sustainable water infrastructure today and into the future.
- Issued the *Water Quality Trading Toolkit for Permit Writers*, which explains how to implement the National Water Quality Trading Policy and is the first "how to trade" guidance published by the Agency (August 2007).

Plans for further improvements include:

- Develop a *Small Communities Team* work plan focused on better management of wastewater for small communities and disadvantaged or underserved populations.
- Prepare a *Drinking Water Capacity Development Strategic Plan* to ensure that the Agency's outreach efforts to small utilities are well coordinated and effective.
- By end of summer of 2008, publish a series of "technical guides" that will provide technical information for establishing trading programs in such areas as water quality monitoring and developing scientifically-based trade ratios.
- By winter 2008, complete the *Check Up Program for Small Systems* software, an asset management tool designed to help small systems.
- Work with the Green Infrastructure Collaborative workgroup on a strategy to expand the use of green infrastructure solutions.
- Host a National Capacity Development Program workshop to expand outreach and explore solutions to the challenges faced by small systems.

6. Safe Drinking Water Information Systems (SDWIS)

Scope of Challenge: *EPA's database for collecting drinking water information is populated by data from states on drinking water violations. The database was designed to served as a compliance tracking system; however, the system depends solely on what states report to EPA as drinking water violations. OMB is concerned that the database is unable to determine definitively such questions as the number of systems in compliance, posing a problem for EPA's Office of Water managers as they try to run a program based upon limited non-compliance information from states. OMB recommends that EPA identify better methods to account for violations, such as the stratified sampling of community water systems approach that the IG suggested in March 2004. (OMB)*

EPA has worked to improve the SDWIS database, completing a major software modernization in 2005 on-time and under-budget. Additionally, EPA has assessed data quality and outlined improvement in our triennial Data Reliability Implementation/Action Plan. In collaboration with states and the Association of State Drinking Water Administrators (ASDWA), we are now implementing a comprehensive data quality improvement plan. EPA and ASDWA have agreed on a data quality goal of 90 percent for health-based violation data by the 2008-2010 triennial

evaluation period: 10 states have already met this goal, and the Agency is tracking progress through its annual performance goals and measures.

EPA has focused its efforts to improve data quality on two objectives: (1) ensuring that the system that receives and maintains the data is technologically robust and user friendly; and (2) ensuring that the compliance decisions made at the state level are appropriate and accurately entered into the data system. EPA has undertaken considerable effort in the last several years to modernize the SDWIS/FED database and improve the SDWIS/STATE application. The Agency has identified completeness of data as an important issue affecting data quality. On-site data verifications (DVs) have proven critical to identifying data quality gaps and potential root causes. OGWDW has adhered to a robust data verification audit process, conducting 15 DV audits in each of FYs 2005, 2006, and 2007, and plans an additional 15 per year in FYs 2008 and 2009.

Highlights of progress include:

- Completed SDWIS modernization.
- Implemented a comprehensive data quality improvement plan for the SDWIS/FED.
- Provided extensive training to primacy agencies on making compliance determinations.
- Developed an electronic tool that allows states to validate their data in advance of data submission to EPA in order to ensure data completeness and enhance data quality.

Plans for further improvements include:

- Continue efforts related to training, tool development, and completion of the next Data Reliability Improvement/Action Plan.
- Continue to review the results of DVs, both on-site and eDVs.
- In FY 2008, pilot the use of the eDV tool as a means to allow states to validate their data in advance of submission to SDWIS/FED.
- Continue to work with ASDWA to address documentation of a subset of state policy decisions on compliance determinations that deviate from regulatory requirements.

7. Water Quality Monitoring and Data

Scope of Challenge: *While EPA has made progress in monitoring water quality, OMB remains concerned about EPA's ability to provide a statistically valid national assessment of water quality for decision-making at the national, state, and regional levels. OMB believes EPA's allowance of states to use Section 106 funds to assess non-statistically valid water quality monitoring has exacerbated the water quality data problem by extending the time it will take EPA and states to have complete probabilistic programs in place. EPA needs to limit the use of the additional Section 106 funds to probabilistic monitoring activities. (OMB)*

EPA believes the use of 106 funds for non-probabilistic monitoring efforts provides regions and states with flexibility they need in assessing water quality. On March 29, 2006, EPA published "Guidelines for the Award of Monitoring Initiative Funds under Section 106 Grant to States,

Interstate Agencies, and Tribes" in the *Federal Register.* These guidelines outline eligibility requirements and allocation of Monitoring Initiative funds (e.g., $8.5M for state/tribal participation in national surveys, less minor rescission, and $10.0M for enhancements to state monitoring programs, less minor rescission). In May 2007, the Deputy Administrator negotiated an agreement allowing EPA to continue allocating the funds using this approach and incorporating a performance-based standard that will provide EPA and states with the incentive to undertake additional statistical survey programs.

EPA's regional monitoring and grants programs have been working with states to distribute Monitoring Initiative funds based on these guidelines. We are making steady progress in working with states to adopt probability surveys and are on track for meeting the performance measure for 50 states implementing state surveys by 2011.

Highlights of progress include:

- Issued the Wadeable Streams Assessment, which lays out the baseline conditions of streams in the lower 48 states.
- Completed the monitoring design for a national lakes survey (field sampling is underway).

Plans for further improvements include:

- Complete the monitoring design for the national rivers survey.
- Issue the third National Coastal Condition Report, which will further our understanding of the trends in costal water conditions.

8. Strategies for Managing Watersheds

Scope of Challenge: *EPA's Chesapeake Bay Program has over 100 measures to assess progress in meeting restoration commitments, but the Agency does not have an approach to translate the measures or a strategy to target limited resources to activities outlined in Chesapeake 2000. While EPA is currently developing a Web-based system to unify its planning documents, these activities do not fully address GAO's recommendations. Additionally, EPA has made progress in guiding the development of an overall strategy for restoring environmental conditions in the Great Lakes Basin. However, it is unclear whether the strategy will be the guiding document for Great Lakes restoration. The Agency needs a clearly defined organizational structure with measurable basin-wide goals and a monitoring system as called for in the Great Lakes Water Quality Agreement and the Clean Water Act. The Agency also needs to follow through to ensure that progress is made on achieving the goals of the strategy. (GAO)*

In May 2004, President Bush signed Executive Order 13340, creating a cabinet-level interagency task force to bring an unprecedented level of collaboration and coordination to restore and protect the Great Lakes. EPA's Great Lakes National Program Office (GLNPO) was cited in the Order and given the responsibility for providing assistance in carrying out the goals of the Order. In addition, the Order created a Federal Interagency Task Force to bring the many governmental partners together to protect and restore the Great Lakes. In December 2005, the Great Lakes Regional Collaboration developed a strategy to guide federal, state, tribal and other partners' action to restore the Great Lakes. Federal commitments have been identified in the Federal Near-Term Action Plan and are being implemented. GLNPO is tracking performance in

improving the Great Lakes and progress toward commitments in the Federal Near-Term Action Plan.

To address GAO concerns regarding the Chesapeake Bay Program, EPA has taken steps to enhance assessment and reporting on the health and restoration of the Chesapeake Bay. EPA's Chesapeake Bay Program Office is developing a strategic implementation plan (SIP) that identifies activities for achieving health and restoration goals for the Chesapeake Bay. This plan, which will be completed in phases, includes five overarching goals and ten key commitments. The first phase focuses on federal actions and is expected to be completed by the end of CY 2007. To date, federal partners (regional and national) have agreed to the goals in the SIP, determined the leads for each of the goals, and agreed to develop a strategic plan that includes annual goals and targets (based on federal funding). The next phase of the SIP will focus on integrating state and federal activities.

Highlights of progress include:

- Issued an assessment report on the Chesapeake Bay which describes the current health of the Bay and progress made in implementing management actions.
- Redesigned how the Agency presents indicator information on its Bay Trends and Indicators website (refer to http://www.chesapeakebay.net/indicators.htm).
- Supported the Great Lakes Interagency Task Force in meeting its requirement to submit a report that summarizes task force activities and recommendations that advance the policy of Executive Order 13340.
- Completed 13 of 48 near term actions, with almost all of the rest on track toward completion. Completed projects include a standardized sanitary survey tool for beach managers to identify pollution sources at beaches and $525,000 in grants piloting the tool to assess 60 beaches in the Great Lakes. In addition, Asian Silver Carp, Largescale Silver Carp, and Black Carp were listed as injurious under the Lacey Act; and the operation of the electric carp barrier in Illinois was continued, to prevent the spread of these species into the Great Lakes.
- Coordinated with NOAA, the U.S. Fish & Wildlife Service, the Forest Service, NRCS, and EPA to collectively provide almost $2 million in federal funding, and even more in leveraged non-federal funds, to support 36 projects to make on-the-ground gains in protecting and restoring watersheds in the Great Lakes.
- Remediated over 800,000 cubic yards of contaminated sediment at five sites under the Great Lakes Legacy Act. Through leveraging, we have utilized federal, state, and private dollars to remove 1.5 million pounds of contaminated sediments from the environment, thereby reducing risk to aquatic life and human health, including over 25,000 pounds of PCBs, over one million pounds of chromium, about 400 pounds of mercury, and 171 pounds of lead.
- Coordinated and leveraged resources with relevant agencies, including the Corps of Engineers, pursuant to the Great Lakes Habitat/Wetlands Initiative to restore, protect or improve approximately 65,000 acres of wetlands towards a 100,000 acre near-term goal. Great Lakes States have committed to meet a similar 100,000 acre wetlands goal.
- Established the Federal Aquatic Invasive Species Rapid Response Subcommittee to coordinate Federal efforts to respond to aquatic invasive species entering the Great Lakes. The Subcommittee and Collaboration partners

have developed a Communication Protocol that will assist in coordinating efforts and communication to stem new invaders to the Lakes and to ensure resources and expertise can be brought to bear to the problems of new invaders.

Plans for further improvements include:

- Continue to work with partners to develop basin-wide goals and indicators for the Great Lakes.
- Continue to work with Environment Canada to develop indicators for measuring the health of the Great Lakes.
- Conduct an independent scientific review of the 2006 assessment report.

9. Management of Leaking Underground Storage Tank(LUST)

Scope of Challenge: *EPA relies on states to ensure that tank owners and operators are in compliance with federal financial responsibility regulations under the underground storage tank program, but does not provide specific guidance to states as to whether or how frequently they should verify coverage. GAO believes EPA lacks assurance that states are adequately overseeing and enforcing financial responsibility provisions and that the Agency's method of monitoring whether state assurance funds provide adequate financial responsibility coverage is limited. In addition, GAO finds that EPA's distribution of Leaking Underground Storage Tank Trust Fund money to states depends on data that may be inaccurate, due to state reporting requirements. (GAO)*

In response to GAO's report, *Leaking Underground Storage Tanks: EPA Should Take Steps to Better Ensure the Effective Use of Public Funding for Cleanups,* EPA agrees that regular verification of financial responsibility coverage is important to ensure adequate funding for cleaning up future releases. The Energy Policy Act of 2005 (EPAct) requires EPA or states, as appropriate, to conduct on-site inspections of USTs every 3 years to determine compliance with requirements imposed by Subtitle I of the Solid Waste Disposal Act. On April 24, 2007, EPA issued final grant guidelines to implement those requirements. These guidelines require that the inspections assess compliance with the financial responsibility requirements.[10]

Additionally, EPA agrees that increased oversight of state assurance fund (state fund) solvency is necessary and important. As the report indicates, EPA recently developed a monitoring tool to assess the financial condition of state funds. EPA is working to improve implementation and utility of that tool. Also, in response to EPAct, EPA is working on guidance to revise and improve its process for monitoring the financial soundness of state funds and work with less solvent funds to improve solvency. EPA expects to complete this guidance in 2008.

Each year EPA distributes LUST Trust Fund money, under an allocation formula that reflects state performance and need, using information reported by states in their end-of-year activity reports. The information contained in these reports, including the number of releases and the population of active tanks, indicates program need and program performance. Nonetheless, EPA agrees with GAO that it is important to ensure the accuracy of information used to support the LUST allocation formula. EPA will continue to work with regions and states to implement

[10] Grant Guidelines to States for Implementing the Inspection Provisions of the Energy Policy Act of 2005, EPA 510-R-07-004, April 2007, http://www.epa.gov/OUST/fedlaws/final_i.htm

quality control measures and, in particular, work toward ensuring that reported data is consistent with existing EPA definitions and is limited to federally-regulated USTs. In addition, as EPA begins working on the EPAct requirements pertaining to the LUST Trust Fund allocation, it will work with regions and states to consider other changes to improve the distribution of future LUST money, including changes that more specifically reflect the need at abandoned LUST sites.

Highlights of progress include:

- Issued final Grant Guidelines on Inspection Requirements, Grant Guidelines to States for Implementing the Inspection Provisions of the Energy Policy Act of 2005. http://www.epa.gov/OUST/fedlaws/final_i.htm
- Continued to emphasize regions' use of the "Quality Assurance/Quality Control Evaluation Checklist" prior to submitting their states' mid-year and annual performance activities. This checklist is a tool to ensure the quality of state and regional data.

Plans for further improvements include:

- Increase efforts to assess the solvency of state funds by raising the level of attention to this issue at national level and providing guidance to regions on increasing their oversight of state funds and reporting annually on their findings.

10. Chemical Regulation

Scope of Challenge: *Recent GAO reviews found that EPA does not routinely assess the risks of all existing chemicals and faces challenges in obtaining the information necessary to do so. Although EPA initiated the High Production Volume (HPV) Challenge Program, it is not yet clear whether the program will produce sufficient information for EPA to determine chemicals' risks to human health and the environment. Furthermore, EPA's reviews of new chemicals provide only limited assurance that health and environmental risks are identified before the chemicals enter commerce. In addition, EPA has limited ability to publicly share the information it receives from chemical companies under TSCA. GAO has recommended that Congress consider providing EPA additional authorities under TSCA to improve its ability to assess chemical risks. GAO recommends that EPA develop and implement a methodology for using information collected through the HPV Challenge Program to prioritize chemicals for further review and identify information needed to assess their risks; promulgate a rule requiring chemical companies to submit to EPA copies of health and safety studies they submit to foreign governments; develop a strategy for validating risk assessment models; and revise regulations to require companies to reassert claims of confidentiality within a certain time period. (GAO)*

EPA will continue work initiated in FY 2007 to evaluate the screening level chemical hazard data obtained through the U.S. High Production Volume (HPV) Challenge Program and companion Organization for Economic Cooperation and Development (OECD) Screening Information Data Set (SIDS) Program. These efforts, combined with the expanded exposure information reported under the 2006 TSCA Inventory Update Reporting (IUR) rule, will lead to the development of risk-based prioritization documents for HPV chemicals. Similar work was initiated in FY 2008, and will continue in 2009, to develop prioritization documents on Moderate Production Volume (MPV) chemicals (25,000 – 1 million pounds/year). This work is included in the Security and Prosperity Partnership agreement between the U.S., Canada and Mexico,

under which the U.S. committed to assess and initiate action on over 9,000 HPV and MPV chemicals by 2012. The risk– and hazard-based prioritization documents identify needed actions on chemicals presenting potential risks. Actions initiated by EPA could involve voluntary information collection, chemical testing, or risk reduction efforts and regulatory actions such as Significant New Use Rules (SNURs), Section 4 Test Rules, or other rules to prevent unreasonable risks.

In addition, EPA continues to follow the Council on Regulatory Environmental Monitoring guidance for evaluating environmental models. EPA is also working internally to validate the use of Structure Activity Relationships assessment tools, giving the Agency confidence in the models and tools it uses to investigate potential risks from new chemicals.

Highlights of progress include:

- Completed screening-level hazard characterization reports for 301 HPV chemicals, exceeding the FY 2007 target of 259. Cumulative progress is 931.
- Completed 33 Proposed Acute Exposure Guideline Levels (AEGLs) which emergency planners and first responders use to prepare for and deal with chemical emergencies by determining safe exposure levels. (This brings the cumulative total since 2006 to 56.)
- Developed and released a Global Data Portal, which allows searching, viewing, and exchanging of test data between the United States, European Union, and other governments (2008). (See http://cs3-hq.oecd.org/scripts/hpv/ for more information.)
- Hosted the "National HPV Chemical Data Users Conference" in December 2006 and two regional conferences in 2007, and used feedback to improve public accessibility to the HPV data.
- Collected expanded screening level exposure-related data on an estimated 7 to 8 thousand chemicals, including processing and use exposure-related data on approximately 40% of those chemicals, under IUR.
- Initiated the Nanoscale Materials Stewardship Program (NMSP) to better characterize existing chemical risks from nanoscale materials.

Plans for further improvements include:

- Increase the production of HPV risk-based decisions to bring the cumulative total to from 150 to 490 chemicals in FY 2009.
- Increase the number of MPV hazard-based decisions from 55 anticipated in FY 2008 to 650 planned for FY 2009.
- Industry will contribute as well to the 3,000 HPV chemical component of the SPP commitments through the industry-led Extended High Production Volume Challenge Program (EHPV), which focuses on approximately 500 chemicals that achieved HPV status after the HPV Challenge Program had commenced.
- Implement its NMSP, which will gather existing data on manufactured nanoscale materials and encourage the development of additional test data.
- Complete the development of a final HPV Challenge report and make it publicly available.

- Evaluate options to change the Voluntary Children's Chemical Evaluation Program (VCCEP) based on experience gained during the pilot phase of the program. Options include modifying certain features of the program to enable VCCEP to operate more rapidly and efficiently, and applying the VCCEP approach to further evaluate HPV Challenge chemicals for which EPA has special concerns after completing screening-level hazard, exposure and risk characterizations.

11. Enforcement and Compliance Activities

Scope of Challenge: *With budget constraints and limited resources and the Nation's high expectations for environmental protection, EPA must develop more flexible and cost-effective approaches for managing environmental enforcement and compliance programs. The Agency needs to intensify efforts to move from a performance management system focused on inspections toward a system focused on achieving measurable improvements; ensure that funds are used to achieve consistent and equitable enforcement; and develop an effective workforce strategy and assessment system to ensure resources are appropriately allocated. Additionally, EPA needs to improve its enforcement data to determine the universe of regulated entities and their characteristics and address apparent inconsistencies in program delivery among EPA's regional offices. (GAO)*

EPA has made considerable progress in recent years in developing and implementing a performance and results-based national enforcement and compliance program. In FY 2005, the Agency began to focus its national enforcement and compliance program on "national enforcement priority" areas of noncompliance that have the most significant effects on public health and the environment. These priorities were determined in consultation with the regions and states and were set for an initial 3-year cycle of 2005-2007. For each priority area, the Agency developed a specific strategy for targeting and achieving results. The Agency also developed specific measures of success, including the key outcome measure of "pounds of pollution reduced or treated" and used a limited number of key management measures, developed in concert with regional measures, to monitor its progress and ensure the accomplishment of its annual goals.

In FY07, the Agency again consulted with regions and states to determine whether the current set of priorities should remain in place for the next 3-year cycle, and whether additional environmental risk and noncompliance problems should be considered. The consensus indicated that the current priorities remain the highest priority problems of national significance. The Agency evaluated progress toward the goals set for each of the national priorities using data derived from key measures. Based on that analysis, strategies were adjusted where needed to ensure efforts are focused appropriately, and goals and measures were refined to better articulate and measure the effectiveness of the Agency's national enforcement program.

EPA has implemented several measures and management practices to ensure equitable and consistent enforcement across the nation. We have established national enforcement priorities; created national Strategy Implementation Teams, with regional and headquarters members, to develop the implementation plans for each national priority area; issued national policies and guidance; and implemented the State Review Framework to enhance the Agency's ability to evaluate and oversee state programs.

EPA continues work to ensure that its resources are directed to the most significant risks to public health and the environment. Identifying national enforcement priorities is critical to this effort, and EPA has used a collaborative process that examines noncompliance in a particular candidate area, the environmental gains from reducing or eliminating the problem, and the appropriateness of an active Federal role in achieving compliance. For the past 5 years, the Agency has reserved funds for addressing resource gaps in implementing these national priorities. Teams responsible for overseeing the implementation of each of the priorities develop competitive proposals to fund activities, tools, and technology to support implementation. Preference in funding is given to proposals that leverage existing resources, improve efficiency, address unmet needs, and have the greatest potential to produce results.

Highlights of progress include:

- Reduced, treated, or eliminated 890 million pounds of pollutants and 1.5 million cubic yards of contaminated soil and water in FY 2007.
- Issued the *Guide for Addressing Environmental Problems: Using an Integrated Strategic Approach*, which provides guidance on selecting the appropriate tools to address noncompliance and environmental problems in a specific context in order to achieve the best outcome.
- Conducted a detailed data-driven review of the performance of each region's compliance and enforcement program including fact-based discussion with regions regarding their results.
- Implemented the SRF to ensure that regional offices conduct consistent oversight of states, and that states consistently implement environmental enforcement programs. The SRF provides critical information on a state's or region's core environmental and compliance assurance performance based on existing data available in EPA's national database. With funding from OPEI, began an in-depth program evaluation of the SRF to enable adjustments aimed at maximizing its effectiveness. The review process has included state and regional participation to ensure all stakeholders' experiences and perspectives are considered.
- Developed the *Key Management Measures Report* for senior managers, which highlights key data on significant noncompliance, raising the visibility and scrutiny of such information.
- In December 2007, held a workshop in which experts discussed white papers on the state of the science of measuring compliance assistance outcomes as well as general and specific deterrent impacts of monitoring and enforcement.

Plans for further improvements include:

- Work toward developing an environmental problem-based strategic architecture centered on enforcement, monitoring, and assistance. This will replace the current tool-based objectives.
- Building on the findings and recommendations in the white papers discussed above, the Agency will explore the feasibility of a pilot project aimed at developing a methodology for measuring general deterrence within specific sectors.

12. Workforce Planning/Human Capital Management

Scope of Challenge: *OIG and GAO believe that EPA continues to face challenges in managing human capital and workforce planning, including its ability to attract, develop, and retain a skilled, diverse, and results-oriented workforce. Although EPA has completed a comprehensive Strategic Workforce Plan for maintaining the right people, at the right location, and at the right time, an OIG review of the Agency's workforce planning effort reveals challenges which may affect the Agency's ability to get to "green" status on the PMA scorecard. GAO finds that despite EPA's progress in improving the management of its human capital, the Agency has not effectively implemented its human capital strategic plan and needs to comprehensively assess its workforce and continue monitoring its progress to ensure a well-trained and motivated workforce with the right mix of skills and experience. GAO further notes that if EPA is to improve its resource planning process, the Agency needs to obtain reliable data on key workload indicators and design budget and cost accounting systems that can isolate resources needed and allocated to key activities. (OIG and GAO)*

In FY 2001, EPA acknowledged human capital (HC) as an Agency-level weakness. Over the years, the Agency has made significant progress in strengthening its HC program. This included developing a robust HC accountability program, improving the HC audit program, expanding the Agency's leadership development programs to enhance skills and ensure continuity of leadership, and establishment of a workforce planning system. As of FY 2007, the Agency had completed all of its improvements except for a few final improvements to address the workforce planning component of the human capital weakness identified in FY 2001. To address the workforce planning concerns identified by OIG and GAO, EPA developed a workforce planning/competency management system that gauges skill gaps and guides the design of strategies for closing the gaps. EPA has worked closely with OMB and the Office of Personnel Management (OPM) to align the Agency's Human Capital Strategy to meet the objectives outlined in the President's Management Agenda (PMA) as it relates to the Strategic Management of Human Capital. The Agency expects to complete all final corrective actions related to this weakness in FY 2008.

Highlights of progress include:

- In FY 2007, retained a "green" progress score for Human Capital under the PMA in every quarter, and remained on target to attain a "green" status score in December 2008.
- Completed implementation of all cycles of the workforce planning process for EPA's priority Mission Critical Occupations, resulting in no major competency or resource gaps.
- Completed implementation of a complete, self-directed Human Capital Accountability system for EPA.
- Continued preparation for full implementation of the electronic Official Personnel Folders (e-OPF).
- Completed initial cost-benefit analysis on HR LoB initiative options for EPA HR IT systems and completed initial analysis of EPA HR consolidation options for EPA HR operations.
- Launched the *"Successful Leaders Program"* as the new EPA-wide mandatory new supervisors training program.
- Achieved EPA's objective for SES time-to-hire of less than 73 days between advertisement and offer.

- Implemented the second successful round of the EPA Agency-wide SES mobility program.
- Achieved full certification from OPM for EPA's SES pay and performance system.
- Completed a full succession planning analysis for EPA SES critical positions, exceeding targets for bench-strength.
- Completed a new EPA Recruiting Plan.

Plans for further improvements include:

- Complete all final corrective actions for workforce planning related to this weakness in FY 2008.

13. Grants Management

Scope of Challenge: *GAO believes that while EPA has issued a 5-year grants management plan and made progress in achieving reforms, weaknesses in implementation and accountability continue to hamper effective grants management. In particular, GAO cites problems remaining in documenting ongoing monitoring of grantee performance and in closing out grants. EPA's lack of monitoring documentation hinders the Agency's ability to collect important data and ensure that grant recipients have met all financial requirements. (OIG and GAO)*

In FY 2000, EPA acknowledged assistance agreements as an Agency-level weakness. Over the years, the Agency has taken substantial actions to improve its management of assistance agreements through updated policies, increased training, and improved accountability. While grants management will continue to require sustained management attention, the Agency has in place an infrastructure responsive to the concerns identified by OIG and GAO. EPA has completed and validated the effectiveness of all corrective actions associated with this weakness. The Agency closed this weakness in September 2007.

Highlights of progress include:

- Continued to enhance grant management skills of EPA employees through mandatory training. As a result, virtually all EPA grants are now managed by certified project officers.
- To strengthen oversight and respond to GAO and internal EPA recommendations, EPA developed a revised Post-Award Monitoring Order that becomes effective January 2008.
- Implemented the Agency's Green Plan for the improvement of financial data, specifically the interface between the Integrated Grants Management System and the Integrated Financial Management System.
- Conducted a two-phase study to review the identified output and outcomes of grant work plans and the progress reports that follow these work plans.
- Continued to implement the Agency's revised competition policy, having competed almost 92 percent of new grants, exceeding performance targets in the Grants Management Plan.

Plans for further improvements include:

- Sustain management attention to grants management.

- Maintain the infrastructure the Agency has established in response to issues identified by GAO and OIG.

14. Financial Management Practices

Scope of Challenge: *GAO annual reviews of EPA's budget justification and related financial management practices have identified several management challenges: the need for enhancing oversight of processes for conducting and tracking closeouts of expired contracts, grants, and interagency agreements and limitations in the Agency's ability to account for its spending on voluntary programs or certain fixed costs, including security and utilities. GAO believes EPA also needs to better account for and report on deobligations and recertifications of expired funds. (GAO)*

EPA currently uses several financial systems to account for Agency spending. The Integrated Financial Management System (IFMS) is based on 1980s technology and has required several work-around databases and modules to track expenditures effectively. The Budget Automation System (BAS) system, for example, tracks program budgets in more detail than IFMS permits. The Agency's Business Intelligence Tool (ORBIT) was recently upgraded, and some program offices have been unable to utilize fully the system's capabilities. EPA is developing a replacement system for IFMS that will enable better practices in financial management. While a temporary interim fix would be to create additional sub-object class codes for fixed costs, the Agency already tracks utility costs closely and is taking steps to further improve the oversight of utility and security charges.

In response to GAO's concerns regarding closeout of expired contracts, EPA's contracting officers review all expired contracts on a monthly basis and report to Office Directors and Deputy Directors on the status of closeout actions. Whenever possible, the Agency performs desk reviews to expedite contract closeouts. However, when we encounter issues with a contractor's direct or indirect cost rates or potential claims about the completion of work or deliverables under a contract, we cannot close the contract and deobligate all unliquidated obligations immediately after it expires. In these cases, not only EPA but either party may recover funds.

Highlights of progress include:

- Installed advanced web-based metering systems at the Research Triangle Park field office, which covers 40 percent of EPA's total energy usage.
- Completed advance metering site visits at 75 percent of its other field offices.

Plans for further improvements include:

- Continue to review energy usage quarterly for each reporting laboratory.
- Complete remaining 25 percent of advance metering site visits.
- Begin implementing the EPAct 2005 requirements to install "advance metering at all appropriate facilities by 2012.

15. Managing for Results

Scope of Challenge: *OIG states that while many of EPA's programs received high PART scores in areas such as program purpose and program management, the Agency continues to face challenges*

in demonstrating program results due to the lack of independent evaluations of sufficient scope and quality; the failure to collect timely and credible performance information; the lack of ambitious targets and timeframes for long-term measures; and the failure to tie budget requests to accomplishing performance goals. OIG believes EPA needs to focus on the logic of program design to ensure that programs and processes have clear and measurable results that allow for transparency and accountability for program performance. Further, OIG believes EPA needs to develop a systematic process for conducting its program evaluations, including leveraging resources for program evaluation competitions and establishing a community of knowledgeable and experienced evaluators from which to draw. Additionally, EPA must continue its efforts to improve strategic planning and tracking of accomplishments and their associated costs. (OIG)

Over the past years, national programs, regional offices, and the Agency's external stakeholders have worked collaboratively to strengthen results-based management at EPA. In FY 2006, the Agency issued its *2006-2011 Strategic Plan*, which charts an ambitious course for environmental protection over the next 5 years and focuses on achieving measurable results that will help advance the protection of human health and the environment. The revised *Strategic Plan* reflects more outcome-oriented goals and objectives and benefits from information on environmental indicators and from futures analysis. The Agency continues to improve the quality of its performance measures as well as its ability to track the cost of achieving environmental results by reducing reporting burden, strengthening data quality, and reinforcing accountability.

OMB acknowledges EPA's significant accomplishments in the area of Financial Performance and Budget and Performance Integration under the PMA. For the 2nd, 3rd, and 4th quarters of FY 2007, EPA received status and progress scores of "green" for its continued use of financial and performance information in day-to-day program management and decision making. EPA also continued efforts to streamline efficiency measures.

Highlights of progress include:

- Enhanced the Annual Commitment System (ACS) to track three new classes of measures (Senior Executive Service organizational assessment, state grant template, and regional priorities). The system also flags measures that contribute to OMB's PART reviews.
- Launched a new intranet website (http://intranet.epa.gov/ocfo/acs) to provide Agency staff with information on ACS development and the annual performance commitment process.
- Developed new detailed performance reports through the Office of the Chief Financial Officer's Reporting and Business Intelligence Tool (ORBIT).
- Retired the Management and Accounting Reporting Systems (MARS), saving $1 million annually and improving Agency access to key budget and financial management reports.
- Achieved OMB approval of efficiency measures for all 51 of EPA's completed PART programs.
- Issued the *2006-2011 Strategic Plan,* which reflects a sharper focus on priorities established by the Administrator (i.e., environmental justice, innovation and collaboration, environmental stewardship, and the role of state and tribal partners).
- Received a "green" status score for Budget and Performance Integration under the PMA for the 2nd and 3rd Quarters of FY 2007.

- Maintained and improved the ACS as a management tool for senior managers to support more effective program management and use of results in Agency decision making.

Plans for further improvements:

- Identify and implement initiatives that support the Agency's vision for greater central governance of performance measures and stronger program and organizational accountability.
- Improve senior managers' access to the Agency's performance information by modifying data systems (BAS, PERS, ACS) to include a "measures central" screen. The screen will improve the usability of the data system and serve as a filter for all Agency performance measures (GPRA, QMR, and senior management measures).
- Identify and endorse a limited set of "top tier" measures and integrate them in the FY 2008 National Program Managers Guidance, FY 2008 annual commitment process, and FY 2009 budget.
- Continue to promote and maintain ORBIT as a primary reporting tool for Agency budget, financial, and performance data.
- Expand the Agency's use of the state grant template to report on FY 2007 results, increasing transparency and ensuring that state grants are accountable for achieving EPA's mission.

16. Data Gaps/Environmental Information

Scope of Challenge: *While noting EPA's progress in addressing critical data gaps in its environmental information, both OIG and GAO believe the Agency still lacks the data it needs to manage for environmental results. OIG notes that data needed to measure program success, to improve risk assessments, and to understand the effectiveness of specific controls are not always available and recommends that EPA continue efforts to set priorities for filling data gaps and that it develop new and strengthen existing outreach programs to leverage data collection efforts with states, tribes, territories, and industries. GAO cites challenges the Agency faces in filling critical data gaps to incorporate better scientific understanding into assessments of environmental trends and conditions and to develop better performance measures for managing programs and measuring program effectiveness. (OIG and GAO)*

As part of its strategic planning, EPA continues to implement and refine processes to identify data gaps and to set priorities for addressing them. For example, the Agency is coordinating the draft Report of the Environment (ROE) with its strategic planning and budgeting process. As part of developing EPA's *2006-2011 Strategic Plan*, national program managers (NPMs) considered the suite of ROE questions and indicators to help develop better environmental performance goals and measures and to identify and set priorities for filling gaps in the information needed to manage programs. NPMs were also required to develop preliminary strategies for improving performance measures to make them more environmental-outcome oriented. Each strategy identified priorities for filling key data gaps to meet the most critical needs and provided a brief recommendation on how to address critical gaps in program data.

Highlights of progress include:

- Developed a pilot (endorsed by Indicators Steering Committee) that assesses how the ROE and strategic planning efforts can best inform and support one another.
- Completed the Water pilot, as part of the ROE/Strategic Plan pilots.
- Briefed the Indicators Steering Committee on the preliminary accomplishments of the ROE/Strategic Plan Pilot.
- Implemented a comprehensive work plan to measure the performance of the Exchange Network.

Plans for further improvements include:

- Continue to further refine the process to identify and prioritize data gaps identified in the ROE as part of the Agency's *Strategic Plan* and budgeting planning processes.

17. Data Standards and Data Quality

Scope of Challenge: *OIG acknowledges that EPA has a substantive effort in place to develop data standards and guide their implementation but notes that standards are not yet incorporated into all information collections. OIG also notes the need for EPA and its partners to continue to focus on ensuring that data are of sufficient quality for decision-making (e.g., assess the integrity of laboratories' drinking water data and incorporate techniques into the laboratory oversight process to identify improper practices and fraud into the laboratory oversight process). OIG recommends EPA set protocols for data system training (e.g., data entry) to ensure that decision makers will have immediate access to reliable water quality data during an emergency. (OIG)*

EPA declared "Implementation of Data Standards" an Agency-level weakness under FMFIA in FY 2005, and has since made progress in addressing challenges related to data standards and data quality. The Agency currently has in place a corrective action strategy that addresses issues identified by OIG. In response to OIG concerns regarding the integrity of laboratories, EPA continues to require laboratories to submit Quality Assurance Reports and Work Plans annually. In accordance with a February 2004 policy directive developed by the Agency's Science Policy Council, laboratories are to seek accreditation from independent accrediting organizations or conduct independent external assessments of their laboratory practices to demonstrate competency. As of April 2007, nine laboratories have achieved accreditation. While EPA has completed the milestones associated with correcting its "Implementation of Data Standards" weakness, we will continue to monitor and verify performance, promote awareness, and develop training modules to implement data standards.

As part of its strategic planning, EPA continues to implement and refine processes to identify data gaps and to set priorities for addressing them. The Office of the Chief Financial Officer (OCFO) directed the Office of Research and Development (ORD) to work with the Office of Environmental Information (OEI) and the Report on the Environment (ROE) Steering Committee to identify Agency priorities for environmental indicators, monitoring, and related information. This effort includes consideration of the Preliminary Strategies developed as part of the 2006-2011 strategic planning process and the ongoing ROE Pilots. In response to the CFO's direction, the ROE Steering Committee is working to identify the most strategic monitoring/data-

development or informational priorities that should be taken into account in future Agency budget strategies as well as the next round of strategic planning.

Highlights of progress include:

- Initiated a ranking process to identify the priorities for environmental indicators, monitoring and related information. Results from the ranking process will be reviewed by the ROE Steering Committee, the Science Policy Council Steering Committee, ad the Regional Planners. A report will be completed in early 2008 and will be used to inform the FY 2010 planning and budgeting and the 2009-2014 strategic planning process.
- Developed a communications plan promoting implementation of upcoming standards and awareness of associated documentation, including implementation strategy, procedures, and best practices.
- Issued a semi-annual Data Standards "Report Card" designed to track program implementation of data standards.
- Reviewed data standards implementation for all systems managed under one prime contractor.

Plans for further improvements include:

- Continue to refine the process to identify and rank data gaps identified in the ROE as part of the Agency's *Strategic Plan* and budget and planning processes.
- Design and launch a new EPA data standards website that will provide data standards and implementation information for EPA program offices and system developers.
- Continue to monitor implementation of data standards within the Registry of EPA Application and Databases and publish the semi-annual Data Standards Report Card.

18. <u>Information Technology Systems Development and Implementation</u>

Scope of Challenge: *While EPA has made some improvements in IT system development and implementation, the Agency needs more management controls and oversight to ensure that IT projects meet the performance standards established by OMB. OIG believes EPA needs to: (1) ensure high-risk IT projects do not exceed prescribed cost and schedule variances; (2) ensure that offices complete system life cycle documentation in a timely manner; and (3) finalize its draft November 2006 Earned Value Management Procedures, which are used to assist project managers in collecting and reporting on performance of major IT investments. (OIG)*

In its September 2005 report, "EPA Needs to Improve Oversight of Its Information Technology Projects," OIG noted that EPA has experienced system development and implementation problems and did not sufficiently oversee information technology (IT) projects to ensure they met planned budgets and schedules.

In response to OIG's audit findings, EPA developed an action plan to enhance management control and oversight. The action plan calls for formally delegating the responsibility for independent oversight review, adding a question in the Capital Planning and Investment Control (CPIC) process focusing on System Life Cycle documentation and approvals, and further

emphasizing the importance of reviewing solutions architecture documents. It also calls for revising the System Life Cycle Management Procedures and continued outreach and education for senior management and Senior Information Officials. While EPA's Chief Information Officer (CIO) has the lead for ensuring effective IT project management, primary authority and responsibility lies with the senior manager in the office that owns the IT project, with appropriate oversight by the CIO.

Highlights of progress include:

- Received certification from program and regional Senior Information Officials that all IT acquisitions of $2 million or more had undergone an E-Gov, Line of Business, and SmartBuy review.
- Ensured that program offices completed Earned Value Management (EVM) analysis and reporting for on-going development projects.
- Developed Enterprise Architecture Governance Procedures that require review, approval, and certification that solutions architectures are aligned with both federal and EPA enterprise architectures.
- Conducted outreach briefings for Agency Senior Information Officials, discussing CPIC and project management.
- Issued the draft *Enterprise Architecture Program 2007 Architecture Development Standard and Guidance*.

Plans for further improvements include:

- Finalize the draft *Earned Value Management Procedures* by the end of FY 2008. The draft is currently being reviewed by program managers.
- Continue to conduct outreach briefings with senior management.
- Conduct annual EVM program reviews with project managers.
- Continue to work with the appropriate office to ensure that EVM systems are included in contracts and to establish guidelines for project/program compliance and system certification.

19. Privacy Programs

Scope of Challenge: *The protection of personally identifiable information (PII) has become the subject of recent oversight by OMB. Like many agencies, EPA is challenged in focusing on its privacy responsibilities and integrating privacy into E-Gov and other mandated privacy activities. EPA needs to update overarching policies outlining administration and management of the privacy program; complete plans to ensure compliance with privacy program policies and procedures and establish oversight; and continue to establish practices to help privacy program managers measure the success of the program. EPA program and regional offices must work together to ensure program success. EPA needs to complete and implement privacy program guidance and other planned activities. (OIG)*

EPA acknowledges that it faces challenges in establishing privacy programs, including revising and developing policies, establishing oversight and accountability, ensuring compliance, and measuring success. However, over the past year, EPA has made significant progress in integrating its privacy and security reporting responsibilities into its business processes.

In June 2006, the Agency established a Personal Identifiable Information (PII) Workgroup under the Quality Information Council to identify and implement short- and long-term actions to protect PII from unauthorized access and disclosure. The workgroup developed an action plan to ensure that key privacy initiatives are met and that the critical tenets of the privacy program are accomplished. The action plan, which includes milestones and expected outcomes, will help the Agency better understand its risks for PII breaches by knowing where its privacy collections are located, managed, and accessed and whether the Agency is storing and collecting unnecessary PII. EPA has already completed several critical activities within the action plan and will continue to monitor progress in this area.

Highlights of progress include:

- Reviewed the Agency's technical controls to ensure consistency with the National Institute of Standards and Technology (NIST) and OMB requirements.
- Prepared System of Records for new system (on-going).
- Established and implemented guidance for preparing Privacy Impact Assessments on all new Agency systems (on-going).
- Reviewed Agency privacy policies to ensure they address the controls identified by NIST.
- Reviewed all Agency Privacy Act Systems of Records to determine which systems are remotely accessed, are downloaded, and/or collect sensitive PII, and whether stringent controls are required.
- Reviewed and submitted draft language for the Agency's new telework policy to ensure that employees are aware of their responsibilities to protect PII when working offsite.

Plans for further improvements include:

- Develop a privacy intranet website that will make privacy documents available to employees.
- Continue to monitor progress to ensure the Agency is in compliance with NIST and OMB standards and/or requirements.

20. Agency Efforts in Support of Homeland Security

Scope of Challenge: *An OIG evaluation of the Agency's Emergency Response Business Plan identified planning assumptions and aspects of the planning process that may challenge EPA's ability to rely on the Plan as a valid assessment of its readiness. OIG believes the plan does not: (1) provide the rationale for the incidents of national significance on which it is based; (2) document the methodology used to determine the required emergency response resources; (3) address the involvement of other federal or state and local emergency response agency resources; (4) incorporate lessons learned; and (5) address the criteria or responsible agencies for deciding when residents may return to an area impacted by an incident. GAO also raises concerns regarding EPA's communications about potential health risks residents may face and protective gear they should have when returning to their homes after an emergency. (OIG and GAO)*

EPA developed an Emergency Response Business (ER) Plan to increase the Agency's preparedness in responding to environmental and homeland security related disasters. The plan provides a framework for the Agency to address simultaneous incidents of national significance

while maintaining effective day-to-day emergency response and removal operations. In preparing the plan, headquarters and regions use five simultaneous incidents in a "worst case" planning scenario around which to develop detailed assessments, gap analyses, and program activities.

EPA is currently working on an agency wide National Approach to Response (NAR) Implementation Plan to address the overall preparedness framework for five simultaneous incidents of national significance. This plan will build on the 2006 ER Business Plan. The Department of Homeland Security (DHS) has developed 15 nationally significant scenarios, many of which will require a substantial response effort by EPA. The five DHS scenarios selected for agency planning are: a chemical incident (blister agent), a radiation incident (RDD), a biological incident (anthrax), and two natural disasters (earthquake and hurricane). A workgroup is currently preparing resource estimates for each of the scenarios.

These estimates will then be used by regional groupings to develop response plans that consider among other things, state and local relationships, unique challenges and regional response assets. The development of the NAR Implementation Plan will be an iterative process. It will identify any gaps and be used to prioritize future preparedness activities.

Highlights of progress include:

- Developed an *Incident Management Handbook* that provides guidance on organizational structure and outlines the communications flow during an incident of national significance.
- Developed and implemented an *Information Technology Strategy* that allows EPA to share information with its partners through the Emergency Management Portal and with the general public from its public web site.
- Formed an *Administrative and Finance Workgroup* to address procurement, property tracking, and pay issues.
- Developed a draft plan for acquiring and maintaining field communications equipment for EPA's emergency response programs.
- Issued the final version of EPA's National Approach to Response (NAR) Crisis Communication Plan. The plan addresses roles and responsibilities for incidents of national significance.
- Developed draft guidance for the Response Support Corps which will support the emergency response staff.

Plans for further improvements include:

- Implement the Emergency Response Business Plan's approach for making the necessary changes in the management of personnel, financial, and other resources through NAR priority projects.
- Continue to develop training courses related to weapons of mass destruction and pandemic and avian influenza.

21. <u>Voluntary Programs</u>

Scope of Challenge: *EPA supports and advocates a range of voluntary programs addressing a wide variety of environmental challenges. However, the growth of these programs has not been*

matched by appropriate organization and oversight. OIG work has found that EPA does not have (1) Agency-wide policies on key evaluative elements; (2) consistent and reliable data; (3) operational guidelines that allow for comparative assessments; (4) definitions that help staff categorize or identify voluntary programs; and (5) a systematic process to develop, test, market, and evaluate the effectiveness of voluntary programs. (OIG)

EPA programs and regions support a range of voluntary/partnership programs, which function as an adjunct to regulatory programs or fill in where a regulatory approach is not practicable. These programs are diverse in size, scope, environmental media, target environmental issue, and stakeholder base. They range from high-profile programs such as ENERGY STAR and Performance Track to smaller, more targeted programs such as Sunwise or Natural Gas STAR. There are more than 50 partnership programs Agency-wide which are managed by many different program offices and regions, each of which is responsible for ensuring that programs are well designed and well run. Thus, it is difficult for any single office response to address such a broadly-defined management challenge.

However, the Agency's Innovation Action Council (IAC), which directs and oversees the Agency's innovation agenda, has initiated a number of efforts to clarify the goals and measures and evaluate the results of innovative and "voluntary" partnership programs. As part of this initiative, a Partnership Program Coordination Team has been formed within OPEI's National Center for Environmental Innovation.

Highlights of progress include:

- Issued guidelines on optimal program design, performance measurement, and marketing.
- Implemented a notification system for new and expanding programs.
- Established a charter that includes an Agency-wide workgroup and network to maximize uniform understanding of and compliance with relevant policies and procedures.
- Established a coordination function in the Office of the Administrator to encourage sound program design and management, with a special emphasis on performance measurement.
- Finalized guidelines for marketing partnership programs, and issued a compilation of previous guidelines. Guidelines are available on the Partners intranet website at: http://www.epa.gov/partners.
- Formed a cross-agency Partnership Program Review Workgroup, charged with developing a framework for the systematic evaluation and assessment of partnership programs.

Plans for further improvements include:

- Initiate the development of a new set of Guidelines on Program Evaluation for partnership programs.
- Finalize a Progress/Accomplishments Report that will compile the environmental results reported by programs across the Agency.
- Conduct training on best practices and procedures, and arrange seminars and discussion groups on new research on trends and strategies.

EPA USER FEE PROGRAM

In FY 2009, EPA will have several user fee programs in operation. These user fee programs and proposals are as follows:

Current Fees: Pesticides

The FY 2009 President's Budget reflects the continued collection of Maintenance fees for review of existing pesticide registrations, and Enhanced Registration Service Fees for the accelerated review of new pesticide registration applications.

- **Pesticides Maintenance Fee Extension**

The Maintenance fee provides funding for the Reregistration program and a certain percentage supports the processing of applications involving "me-too" or inert ingredients. In FY 2009, the Agency expects to collect $22 million in Maintenance fees under current law.

- **Enhanced Registration Services**

Entities seeking to register pesticides for use in the United States pay a fee at the time the registration action request is submitted to EPA specifically for accelerated pesticide registration decision service. This process has introduced new pesticides to the market more quickly. In FY 2009, the Agency expects to collect $6 million in Enhanced Registration Service fees under current law.

Current Fees: Other

- **Pre-Manufacturing Notification Fee**

Since 1989, the Pre-Manufacturing Notifications (PMN) fee has been collected for the review and processing of new chemical pre-manufacturing notifications submitted to EPA by the chemical industry. These fees are paid at the time of submission of the PMN for review by EPA's Toxic Substances program. 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 is authorized to collect up to $1.8 million in PMN fees in FY 2009 under current law.

- **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 $1 million will be deposited in FY 2009.

- **Motor Vehicle and Engine Compliance Program Fee**

This fee is authorized by the Clean Air Act of 1990 and is managed by the Air and Radiation program. Fee collections began in August 1992. This fee is imposed on manufacturers of light-duty vehicles, light and heavy trucks and motorcycles. The fees cover EPA's cost of certifying new engines and vehicles and monitoring compliance of in-use engines and vehicles.

In 2004, EPA promulgated a rule that updated existing fees and established fees for newly-regulated vehicles and engines. In addition to cars and trucks, the fees for new compliance programs are also imposed on heavy-duty, in-use, and nonroad industries, including large diesel and gas equipment (earthmovers, tractors, forklifts, compressors, etc), handheld and non-handheld utility engines (chainsaws, weed-whackers, leaf-blowers, lawnmowers, tillers, etc.), marine (boat motors, watercraft, jet-skis), locomotive, aircraft and recreational vehicles (off-road motorcycles, all-terrain vehicles, snowmobiles). Since then, EPA has added or proposed to apply certification fees to additional industry sectors as new programs are developed, such as for stationary engines and for evaporative requirements for nonroad engines. In FY 2009, EPA expects to collect $19.4 million from this fee.

Fee Proposals: Pesticides

- **Pesticides 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. The collection of this fee has been blocked by the Pesticides Registration Improvement Act (PRIA) through 2012. Legislative language will be submitted to allow for the collection of Pesticide Tolerance fees in FY 2009 and the Administration will submit legislative language proposing to collect $13 million in Pesticide Tolerance fees in FY 2009.

- **Enhanced Registration Services**

Legislative language will be submitted proposing to publish a new fee schedule to collect an additional $12 million in FY 2009 to better align fee collections with program costs. Currently those who directly benefit from EPA's registration services cover only a fraction of the costs to operate the program, leaving the general taxpayer to shoulder the remaining burden.

- **Pesticides Maintenance Fee Extension**

Under current law, the Agency expects to collect $22 million in Maintenance fees in FY 2009. Legislative language will be submitted to allow the collection of an additional $23 million in order to more closely align fee collections with program costs. The President's Budget proposes to relieve the burden on the general taxpayer and finance the costs of operating the Reregistration program from those who directly benefit from EPA's reregistration activities.

Fee Proposals: Other

- **Pre-Manufacturing Notification Fee**

Under the current fee structure, the Agency would collect $1.8 million in FY 2009. Legislative language will be submitted to remove the statutory cap in the Toxic Substances Control Act on Pre-Manufacturing Notification Fees. In FY 2009, EPA expects to collect an additional $4 million by removing the statutory cap.

WORKING CAPITAL FUND

In FY 2009, the Agency begins its thirteenth year of operation of the Working Capital Fund (WCF). It is a revolving fund authorized by law to finance a cycle of operations, where the costs of goods and services provided are charged to 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 Agency's FY 1998 Appropriations Act.

The Chief Financial Officer (CFO) initiated the WCF in FY 1997 as part of an 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 Associate Chief Financial Officer, is composed of eighteen permanent members from the program and regional offices.

Four Agency activities provided in FY 2008 will continue into FY 2009. These are the Agency's information technology and telecommunications operations, managed by the Office of Environmental Information, Agency postage costs, managed by the Office of Administration, and the Agency's core accounting system and relocation services, which are both managed by the Office of the Chief Financial Officer.

The Agency's FY 2009 budget request includes resources for these four activities in each National Program Manager's submission, totaling approximately $185.0 million. These estimated resources may be increased to incorporate the additional service needs of program offices during the operating year. To the extent that these increases are subject to Congressional reprogramming notifications, the Agency will comply with all applicable requirements. In FY 2009, the Agency will continue to market its information technology and relocation services to other Federal agencies in an effort to deliver high quality services external to EPA, which will result in lower costs to EPA customers.

ACRONYMS FOR STATUTORY AUTHORITIES

AEA: Atomic Energy Act, as amended, and Reorganization Plan #3

ADA: Americans with Disabilities Act

ADEA: Age Discrimination in Employment Act

AHERA: Asbestos Hazard Emergency Response Act

AHPA: Archaeological and Historic Preservation Act

ASHAA: Asbestos in Schools Hazard Abatement Act

APA: Administrative Procedures Act

ASTCA: Antarctic Science, Tourism, and Conservation Act

BEACH Act of 2000: Beaches Environmental Assessment and Coastal Health Act

BRERA: Brownfields Revitalization and Environmental Restoration Act

CAA: Clean Air Act

CAAA: Clean Air Act Amendments

CCA: Clinger Cohen Act

CCAA: Canadian Clean Air Act

CEPA: Canadian Environmental Protection Act

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act (1980)

CFOA: Chief Financial Officers Act

CFR: Code of Federal Regulations

CICA: Competition in Contracting Act

CRA: Civil Rights Act

CSA: Computer Security Act

CWPPR: Coastal Wetlands Planning, Protection, and Restoration Act of 1990

CWA: Clean Water Act

CZARA: Coastal Zone Management Act Reauthorization Amendments

CZMA: Coastal Zone Management Act

DPA: Deepwater Ports Act

DREAA: Disaster Relief and Emergency Assistance Act

ECRA: Economic Cleanup Responsibility Act

EFOIA: Electronic Freedom of Information Act

EPAA: Environmental Programs Assistance Act

EPAAR: EPA Acquisition Regulations

EPCA: Energy Policy and Conservation Act

EPACT: Energy Policy Act

EPCRA: Emergency Planning and Community Right to Know Act

ERD&DAA: Environmental Research, Development and Demonstration Authorization Act

ESA: Endangered Species Act

ESECA: Energy Supply and Environmental Coordination Act

FACA: Federal Advisory Committee Act

FAIR: Federal Activities Inventory Reform Act

FCMA: Fishery Conservation and Management Act

FEPCA: Federal Environmental Pesticide Control Act; enacted as amendments to FIFRA.

FFDCA: Federal Food, Drug, and Cosmetic Act

FGCAA: Federal Grant and Cooperative Agreement Act

FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act

FLPMA: Federal Land Policy and Management Act

FMFIA: Federal Managers' Financial Integrity Act

FOIA: Freedom of Information Act

FPAS: Federal Property and Administration Services Ac

FPA: Federal Pesticide Act

FPPA: Federal Pollution Prevention Act

FPR: Federal Procurement Regulation

FQPA: Food Quality Protection Act

FRA: Federal Register Act

FSA: Food Security Act

FUA: Fuel Use Act

FWCA: Fish and Wildlife Coordination Act

FWPCA: Federal Water Pollution and Control Act (aka CWA)

GISRA: Government Information Security Reform Act

GMRA: Government Management Reform Act

GPRA: Government Performance and Results Act

HMTA: Hazardous Materials Transportation Act

HSWA: Hazardous and Solid Waste Amendments

IGA: Inspector General Act

IPA: Intergovernmental Personnel Act

IPIA: Improper Payments Information Act

ISTEA: Intermodal Surface Transportation Efficiency Act

LPA-US/MX-BR: 1983 La Paz Agreement on US/Mexico Border Region

MPPRCA: Marine Plastic Pollution, Research and Control Act of 1987

MPRSA: Marine Protection Research and Sanctuaries Act

NAAEC: North American Agreement on Environmental Cooperation

NAAQS: National Ambient Air Quality Standard

NAWCA: North American Wetlands Conservation Act,

NEPA: National Environmental Policy Act

NHPA: National Historic Preservation Act

NIPDWR: National Interim Primary Drinking Water Regulations

NISA: National Invasive Species Act of 1996

ODA: Ocean Dumping Act

OPA: The Oil Pollution Act

OWBPA: Older Workers Benefit Protection Act

PBA: Public Building Act

PFCRA: Program Fraud Civil Remedies Act

PHSA: Public Health Service Act

PLIRRA: Pollution Liability Insurance and Risk Retention Act

PR: Privacy Act

PRA: Paperwork Reduction Act

QCA: Quiet Communities Act

RCRA: Resource Conservation and Recovery Act

RLBPHRA: Residential Lead-Based Paint Hazard Reduction Act

RFA: Regulatory Flexibility Act

RICO: Racketeer Influenced and Corrupt Organizations Act

SARA: Superfund Amendments and Reauthorization Act of 1986

SBREFA: Small Business Regulatory Enforcement Fairness Act of 1996

SBLRBRERA: Small Business Liability Relief and Brownfields Revitalization and Environmental Restoration Act

SDWA: Safe Drinking Water Act

SICEA: Steel Industry Compliance Extension Act

SMCRA: Surface Mining Control and Reclamation Act

SPA: Shore Protection Act of 1988

SWDA: Solid Waste Disposal Act

TCA: Tribal Cooperative Agreement

TSCA: Toxic Substances Control Act

UMRA: Unfunded Mandates Reform Act.

UMTRLWA: Uranium Mill Tailings Radiation Land Withdrawal Act

USC: United States Code

USTCA: Underground Storage Tank Compliance Act

WQA: Water Quality Act of 1987

WRDA: Water Resources Development Act

WSRA: Wild and Scenic Rivers Act

WWWQA: Wet Weather Water Quality Act of 2000

STAG CATEGORICAL PROGRAM GRANTS

Statutory Authority and Eligible Uses
(Dollars in Thousands)

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
State and Local Air Quality Management	CAA, Section 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.	$1,000.0	Goal 1, Obj. 1	$0.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
State and Local Air Quality Management	CAA, 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	Carrying out the traditional prevention and control programs required by the CAA and associated program support costs, including monitoring activities (section 105); Coordinating or facilitating a multi-jurisdictional approach to carrying out the traditional prevention and control programs required by the CAA (sections 103 and 106); Supporting training for CAA section 302(b) air pollution control agency staff (sections 103 and 105); Supporting research, investigative and demonstration projects(section 103)	$215,825.0	Goal 1, Obj. 1	$185,580.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Tribal Air Quality Management	CAA, Sections 103 and 105; Tribal Cooperative Agreements (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	$10,769.0	Goal 1, Obj. 1	$13,300.0
Radon	TSCA, 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	$7,948.0	Goal 1, Obj. 2	$8,074.0
Water Pollution Control (Section 106)	FWPCA, as amended, Section 106; TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia, Interstate Agencies	Develop and carry out surface and ground water pollution control programs, including NPDES permits, TMDL's, WQ standards, monitoring, and NPS control activities.	$218,206.0	Goal 2, Obj. 2	$221,664.0
Nonpoint Source (NPS – Section 319)	FWPCA, as amended, Section 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.	$200,857.0	Goal 2, Obj. 2	$184,540.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Wetlands Program Development	FWPCA, as amended, Section 104 (b)(3); TCA in annual Appropriations Acts.	States, Local Governments, Tribes, Interstate Organizations, Intertribal Consortia, Non-Profit Organizations	To develop new wetland programs or enhance existing programs for the protection, management and restoration of wetland resources.	$16,567.0	Goal 4, Obj. 3	$16,830.0
Public Water System Supervision (PWSS)	SDWA, Section 1443(a); TCA in annual Appropriations Acts.	States, Tribes, 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.	$97,554.0	Goal 2, Obj. 1	$99,100.0
Homeland Security Grants	SDWA, Section 1442; TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	To assist states and Tribes in coordinating their water security activities with other homeland security efforts.	$4,873.0	Goal 2, Obj. 1	$4,950.0
Underground Injection Control (UIC)	SDWA, Section 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.	$10,721.0	Goal 2, Obj. 1	$10,891.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Beaches Protection	BEACH 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.	$9,746.0	Goal 2, Obj. 1	$9,900.0
Hazardous Waste Financial Assistance	RCRA, Section 3011; FY 1999 Appropriations Act (PL 105-276); TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Development & Implementation of Hazardous Waste Programs	$101,734.0	Goal 3, Obj. 1 Obj. 2	$103,346.0
Brownfields	CERCLA, as amended by the Small Business Liability Relief and Brownfields Revitalization Act (P.L. 107-118); GMRA (1990); FGCAA.	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.	$48,723.0	Goal 4, Obj. 2	$49,495.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Underground Storage Tanks (UST)	SWDA, as amended by the Superfund Reauthorization Amendments of 1986 (Subtitle I), Section 2007(f), 42 U.S.C. 6916(f)(2); EPAct of 2005, Title XV – Ethanol and Motor Fuels, Subtitle B – Underground Storage Tank Compliance, Sections 1521-1533, P.L. 109-58, 42 U.S.C. 15801; Tribal Grants -P.L. 105-276.	States, Federally-Recognized Tribes, Intertribal Consortia	Develop and/or implement state or Indian UST program; provide funding for SEE enrollees to work on the states' underground storage tanks and to support direct UST implementation programs.	$2,461.0	Goal 3, Obj. 1	$22,800.0
Pesticides Program Implementation	FIFRA, Sections 20 and 23; the FY 1999 Appropriations Act (PL 105-276); FY 2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Implement the following programs through grants to states, Tribes, partners, and supporters: Certification and Training / Worker Protection, Endangered Species Protection Program (ESPP) Field Activities, Tribal Program, and Pesticide Environmental Stewardship Program.	$12,768.0	Goal 4, Obj. 1	$12,970.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Lead	TSCA, Sections 10 and 404 (g); FY 2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Implement the lead-based paint activities in the Training and Certification program through EPA-authorized state, territorial and Tribal programs and, in areas without authorization, through direct implementation by the Agency. Activities conducted as part of this program include issuing grants for the training and certification of individuals and firms engaged in lead-based paint abatement and inspection activities and the accreditation of qualified training providers.	$13,352.0	Goal 4, Obj. 1	$13,564.0
Toxic Substances Compliance	TSCA, Sections 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	$5,019.0	Goal 5, Obj. 1	$5,099.0
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	$18,419.0	Goal 5, Obj. 1	$18,711.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
National Environmental Information Exchange Network (NEIEN, aka "the Exchange Network")	As appropriate, CAA, Section 103; CWA, Section 104; RCRA, Section 8001; FIFRA, Section 20; TSCA, Sections 10 and 28; MPRSA, Section 203; SDWA, Section 1442; Indian Environmental General Assistance Program Act of 1992, as amended; FY 2000 Appropriations Act (P.L. 106-74); Pollution Prevention Act of 1990, Section 6605; FY 2002 Appropriations Act and FY 2003 Appropriations Acts.	States, Tribes, Interstate Agencies, Tribal Consortium, Other Agencies with Related Environmental Information Activities	Helps states, territories, tribes, and intertribal consortia develop the information management and technology (IM/IT) capabilities they need to participate in the Exchange Network, to continue and expand data-sharing programs, and to improve access to environmental information.	$9,844.0	Goal 5, Obj. 2	$11,000.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Pollution Prevention	Pollution Prevention Act of 1990, Section 6605; TSCA Section 10; FY 2000 Appropriations Act (P.L. 106-74); TCA in annual Appropriations Acts.	States, Tribes, Intertribal Consortia	Provides assistance to states and state entities (i.e., colleges and universities) and Federally-recognized Tribes and intertribal consortia in order to deliver pollution prevention technical assistance to small and medium-sized businesses. A goal of the program is to assist businesses and industries with identifying improved environmental strategies and solutions for reducing waste at the source.	$4,863.0	Goal 5, Obj. 2	$4,940.0
Sector Program (previously Enforcement & Compliance Assurance)	As appropriate, CAA, Section 103; CWA, Section 104; FIFRA, Section 20; TSCA, Sections 10 and 28; MPRSA, Section 203; SDWA, Section 1442; Indian Environmental General Assistance Program Act of 1992, as amended; TCA in annual Appropriations Acts.	State, Territories, Tribes, Intertribal Consortia, Multi-Jurisdictional Organizations, Universities, Associations of Environmental Regulatory Personnel	Assist in developing innovative sector-based, multi-media, or single-media approaches to enforcement and compliance assurance. Provide training on sectors, compliance and enforcement, and single or multi-media programs.	$1,209.0	Goal 5, Obj. 1	$1,828.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2008 Enacted Budget Dollars (X1000)	FY 2009 Goal/ Objective	FY 2009 President's Budget Dollars (X1000)
Tribal General Assistance Program	Indian Environmental General Assistance Program Act (42 U.S.C. 4368b); TCA in annual Appropriations Acts.	Tribal Governments, Intertribal Consortia	Plan and develop Tribal environmental protection programs.	$56,037.0	Goal 5, Obj. 3	$57,925.0

PROGRAM PROJECTS BY APPROPRIATION
(Dollars in Thousands)

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Acquisition Management	**$54,802.0**	**$53,118.0**	**$56,345.0**	**$3,227.0**
EPM	$29,992.0	$28,629.0	$31,195.0	$2,566.0
LUST	$165.0	$162.0	$165.0	$3.0
Superfund	$24,645.0	$24,327.0	$24,985.0	$658.0
Administrative Law	**$5,260.0**	**$5,178.0**	**$4,949.0**	**($229.0)**
EPM	$5,260.0	$5,178.0	$4,949.0	($229.0)
Alternative Dispute Resolution	**$2,012.0**	**$1,985.0**	**$2,110.0**	**$125.0**
EPM	$1,175.0	$1,160.0	$1,264.0	$104.0
Superfund	$837.0	$825.0	$846.0	$21.0
Audits, Evaluations, and Investigations	**$45,157.0**	**$52,585.0**	**$46,647.0**	**($5,938.0)**
IG	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
Superfund	$7,149.0	$11,486.0	$7,164.0	($4,322.0)
Beach / Fish Programs	**$2,830.0**	**$2,789.0**	**$2,795.0**	**$6.0**
EPM	$2,830.0	$2,789.0	$2,795.0	$6.0
Brownfields	**$23,450.0**	**$23,665.0**	**$22,732.0**	**($933.0)**
EPM	$23,450.0	$23,665.0	$22,732.0	($933.0)
Brownfields Projects	**$89,258.0**	**$93,518.0**	**$93,558.0**	**$40.0**
STAG	$89,258.0	$93,518.0	$93,558.0	$40.0
Categorical Grant: Beaches Protection	**$9,900.0**	**$9,746.0**	**$9,900.0**	**$154.0**
STAG	$9,900.0	$9,746.0	$9,900.0	$154.0

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: Brownfields	**$49,495.0**	**$48,723.0**	**$49,495.0**	**$772.0**
STAG	$49,495.0	$48,723.0	$49,495.0	$772.0
Categorical Grant: Environmental Information	**$12,850.0**	**$9,844.0**	**$11,000.0**	**$1,156.0**
STAG	$12,850.0	$9,844.0	$11,000.0	$1,156.0
Categorical Grant: Hazardous Waste Financial Assistance	**$103,346.0**	**$101,734.0**	**$103,346.0**	**$1,612.0**
STAG	$103,346.0	$101,734.0	$103,346.0	$1,612.0
Categorical Grant: Homeland Security	**$4,950.0**	**$4,873.0**	**$4,950.0**	**$77.0**
STAG	$4,950.0	$4,873.0	$4,950.0	$77.0
Categorical Grant: Lead	**$13,564.0**	**$13,352.0**	**$13,564.0**	**$212.0**
STAG	$13,564.0	$13,352.0	$13,564.0	$212.0
Categorical Grant: Nonpoint Source (Sec. 319)	**$194,040.0**	**$200,857.0**	**$184,540.0**	**($16,317.0)**
STAG	$194,040.0	$200,857.0	$184,540.0	($16,317.0)
Categorical Grant: Pesticides Enforcement	**$18,711.0**	**$18,419.0**	**$18,711.0**	**$292.0**
STAG	$18,711.0	$18,419.0	$18,711.0	$292.0
Categorical Grant: Pesticides Program Implementation	**$12,970.0**	**$12,768.0**	**$12,970.0**	**$202.0**
STAG	$12,970.0	$12,768.0	$12,970.0	$202.0
Categorical Grant: Pollution Control (Sec. 106)	**$221,664.0**	**$218,206.0**	**$221,664.0**	**$3,458.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
STAG	$221,664.0	$218,206.0	$221,664.0	$3,458.0
Categorical Grant: Pollution Prevention	**$5,940.0**	**$4,863.0**	**$4,940.0**	**$77.0**
STAG	$5,940.0	$4,863.0	$4,940.0	$77.0
Categorical Grant: Public Water System Supervision (PWSS)	**$99,100.0**	**$97,554.0**	**$99,100.0**	**$1,546.0**
STAG	$99,100.0	$97,554.0	$99,100.0	$1,546.0
Categorical Grant: Radon	**$8,074.0**	**$7,948.0**	**$8,074.0**	**$126.0**
STAG	$8,074.0	$7,948.0	$8,074.0	$126.0
Categorical Grant: Sector Program	**$2,228.0**	**$1,209.0**	**$1,828.0**	**$619.0**
STAG	$2,228.0	$1,209.0	$1,828.0	$619.0
Categorical Grant: State and Local Air Quality Management	**$185,180.0**	**$216,825.0**	**$185,580.0**	**($31,245.0)**
STAG	$185,180.0	$216,825.0	$185,580.0	($31,245.0)
Categorical Grant: Targeted Watersheds	**$0.0**	**$9,844.0**	**$0.0**	**($9,844.0)**
STAG	$0.0	$9,844.0	$0.0	($9,844.0)
Categorical Grant: Toxics Substances Compliance	**$5,099.0**	**$5,019.0**	**$5,099.0**	**$80.0**
STAG	$5,099.0	$5,019.0	$5,099.0	$80.0
Categorical Grant: Tribal Air Quality Management	**$10,940.0**	**$10,769.0**	**$13,300.0**	**$2,531.0**
STAG	$10,940.0	$10,769.0	$13,300.0	$2,531.0
Categorical Grant: Tribal General	**$56,925.0**	**$56,037.0**	**$57,925.0**	**$1,888.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Assistance Program				
STAG	$56,925.0	$56,037.0	$57,925.0	$1,888.0
Categorical Grant: Underground Injection Control (UIC)	**$10,891.0**	**$10,721.0**	**$10,891.0**	**$170.0**
STAG	$10,891.0	$10,721.0	$10,891.0	$170.0
Categorical Grant: Underground Storage Tanks	**$22,274.0**	**$2,461.0**	**$22,800.0**	**$20,339.0**
STAG	$22,274.0	$2,461.0	$22,800.0	$20,339.0
Categorical Grant: Wetlands Program Development	**$16,830.0**	**$16,567.0**	**$16,830.0**	**$263.0**
STAG	$16,830.0	$16,567.0	$16,830.0	$263.0
Central Planning, Budgeting, and Finance	**$100,368.0**	**$99,042.0**	**$107,856.0**	**$8,814.0**
EPM	$74,960.0	$73,949.0	$80,623.0	$6,674.0
LUST	$1,102.0	$1,085.0	$1,131.0	$46.0
Superfund	$24,306.0	$24,008.0	$26,102.0	$2,094.0
Children and Other Sensitive Populations: Agency Coordination	**$6,203.0**	**$6,144.0**	**$6,309.0**	**$165.0**
EPM	$6,203.0	$6,144.0	$6,309.0	$165.0
Civil Enforcement	**$129,594.0**	**$132,828.0**	**$135,250.0**	**$2,422.0**
EPM	$126,645.0	$129,886.0	$133,017.0	$3,131.0
Oil Spills	$2,065.0	$2,072.0	$2,233.0	$161.0
Superfund	$884.0	$870.0	$0.0	($870.0)
Civil Rights / Title VI Compliance	**$11,240.0**	**$11,065.0**	**$11,097.0**	**$32.0**
EPM	$11,240.0	$11,065.0	$11,097.0	$32.0

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Clean Air Allowance Trading Programs	**$27,647.0**	**$28,246.0**	**$28,157.0**	**($89.0)**
EPM	$19,388.0	$19,131.0	$19,898.0	$767.0
S&T	$8,259.0	$9,115.0	$8,259.0	($856.0)
Climate Protection Program	**$101,031.0**	**$108,705.0**	**$98,410.0**	**($10,295.0)**
EPM	$87,927.0	$90,374.0	$87,008.0	($3,366.0)
S&T	$13,104.0	$18,331.0	$11,402.0	($6,929.0)
Commission for Environmental Cooperation	**$4,022.0**	**$3,962.0**	**$0.0**	**($3,962.0)**
EPM	$4,022.0	$3,962.0	$0.0	($3,962.0)
Compliance Assistance and Centers	**$30,548.0**	**$28,742.0**	**$27,513.0**	**($1,229.0)**
EPM	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
LUST	$688.0	$709.0	$753.0	$44.0
Oil Spills	$291.0	$286.0	$303.0	$17.0
Superfund	$22.0	$22.0	$22.0	$0.0
Compliance Incentives	**$9,930.0**	**$10,777.0**	**$10,409.0**	**($368.0)**
EPM	$9,786.0	$10,618.0	$10,263.0	($355.0)
Superfund	$144.0	$159.0	$146.0	($13.0)
Compliance Monitoring	**$94,610.0**	**$89,891.0**	**$97,217.0**	**$7,326.0**
EPM	$93,428.0	$88,726.0	$96,025.0	$7,299.0
Superfund	$1,182.0	$1,165.0	$1,192.0	$27.0
Congressional, Intergovernmental, External Relations	**$49,902.0**	**$49,125.0**	**$49,756.0**	**$631.0**
EPM	$49,747.0	$48,971.0	$49,756.0	$785.0

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Superfund	$155.0	$154.0	$0.0	($154.0)
Congressionally Mandated Projects	**$0.0**	**$162,476.0**	**$0.0**	**($162,476.0)**
EPM	$0.0	$13,437.0	$0.0	($13,437.0)
S&T	$0.0	$5,316.0	$0.0	($5,316.0)
STAG	$0.0	$143,723.0	$0.0	($143,723.0)
Criminal Enforcement	**$48,855.0**	**$49,795.0**	**$52,214.0**	**$2,419.0**
EPM	$39,688.0	$40,742.0	$44,384.0	$3,642.0
Superfund	$9,167.0	$9,053.0	$7,830.0	($1,223.0)
Diesel Emissions Reduction Grant Program	**$35,000.0**	**$59,064.0**	**$49,220.0**	**($9,844.0)**
STAG	$35,000.0	$59,064.0	$49,220.0	($9,844.0)
Drinking Water Programs	**$100,383.0**	**$100,097.0**	**$103,035.0**	**$2,938.0**
EPM	$96,967.0	$96,722.0	$99,476.0	$2,754.0
S&T	$3,416.0	$3,375.0	$3,559.0	$184.0
Endocrine Disruptors	**$5,890.0**	**$8,663.0**	**$5,847.0**	**($2,816.0)**
EPM	$5,890.0	$8,663.0	$5,847.0	($2,816.0)
Enforcement Training	**$3,985.0**	**$3,923.0**	**$3,901.0**	**($22.0)**
EPM	$3,145.0	$3,096.0	$3,043.0	($53.0)
Superfund	$840.0	$827.0	$858.0	$31.0
Environment and Trade	**$1,945.0**	**$1,920.0**	**$0.0**	**($1,920.0)**
EPM	$1,945.0	$1,920.0	$0.0	($1,920.0)
Environmental Education	**$0.0**	**$8,860.0**	**$0.0**	**($8,860.0)**
EPM	$0.0	$8,860.0	$0.0	($8,860.0)

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Environmental Justice	**$4,579.0**	**$7,144.0**	**$4,568.0**	**($2,576.0)**
EPM	$3,822.0	$6,399.0	$3,811.0	($2,588.0)
Superfund	$757.0	$745.0	$757.0	$12.0
Exchange Network	**$16,797.0**	**$16,548.0**	**$19,491.0**	**$2,943.0**
EPM	$15,364.0	$15,137.0	$18,058.0	$2,921.0
Superfund	$1,433.0	$1,411.0	$1,433.0	$22.0
Facilities Infrastructure and Operations	**$480,865.0**	**$471,569.0**	**$490,551.0**	**$18,982.0**
B&F	$26,931.0	$26,511.0	$26,931.0	$420.0
EPM	$303,728.0	$297,189.0	$311,068.0	$13,879.0
LUST	$901.0	$887.0	$902.0	$15.0
Oil Spills	$490.0	$488.0	$496.0	$8.0
S&T	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Superfund	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Federal Stationary Source Regulations	**$26,504.0**	**$26,091.0**	**$26,787.0**	**$696.0**
EPM	$26,504.0	$26,091.0	$26,787.0	$696.0
Federal Support for Air Quality Management	**$101,376.0**	**$101,582.0**	**$106,624.0**	**$5,042.0**
EPM	$90,490.0	$89,464.0	$95,538.0	$6,074.0
S&T	$10,886.0	$12,118.0	$11,086.0	($1,032.0)
Federal Support for Air Toxics Program	**$26,963.0**	**$26,610.0**	**$24,996.0**	**($1,614.0)**
EPM	$24,711.0	$24,390.0	$22,693.0	($1,697.0)
S&T	$2,252.0	$2,220.0	$2,303.0	$83.0
Federal Vehicle and Fuels Standards and Certification	**$65,722.0**	**$66,796.0**	**$69,543.0**	**$2,747.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
S&T	$65,722.0	$66,796.0	$69,543.0	$2,747.0
Financial Assistance Grants / IAG Management	**$26,488.0**	**$26,243.0**	**$29,093.0**	**$2,850.0**
EPM	$23,439.0	$23,242.0	$25,977.0	$2,735.0
Superfund	$3,049.0	$3,001.0	$3,116.0	$115.0
Forensics Support	**$17,385.0**	**$18,632.0**	**$17,998.0**	**($634.0)**
S&T	$15,075.0	$14,882.0	$15,557.0	$675.0
Superfund	$2,310.0	$3,750.0	$2,441.0	($1,309.0)
Geographic Program: Chesapeake Bay	**$28,768.0**	**$30,528.0**	**$29,001.0**	**($1,527.0)**
EPM	$28,768.0	$30,528.0	$29,001.0	($1,527.0)
Geographic Program: Great Lakes	**$21,757.0**	**$21,686.0**	**$22,261.0**	**$575.0**
EPM	$21,757.0	$21,686.0	$22,261.0	$575.0
Geographic Program: Gulf of Mexico	**$4,457.0**	**$5,618.0**	**$4,578.0**	**($1,040.0)**
EPM	$4,457.0	$5,618.0	$4,578.0	($1,040.0)
Geographic Program: Lake Champlain	**$934.0**	**$2,707.0**	**$934.0**	**($1,773.0)**
EPM	$934.0	$2,707.0	$934.0	($1,773.0)
Geographic Program: Long Island Sound	**$467.0**	**$4,922.0**	**$467.0**	**($4,455.0)**
EPM	$467.0	$4,922.0	$467.0	($4,455.0)
Geographic Program: Other	**$8,575.0**	**$32,072.0**	**$7,715.0**	**($24,357.0)**
EPM	$8,575.0	$32,072.0	$7,715.0	($24,357.0)
Great Lakes Legacy Act	**$35,000.0**	**$34,454.0**	**$35,000.0**	**$546.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
EPM	$35,000.0	$34,454.0	$35,000.0	$546.0
Homeland Security: Communication and Information	**$6,906.0**	**$6,822.0**	**$6,940.0**	**$118.0**
EPM	$6,906.0	$6,822.0	$6,940.0	$118.0
Homeland Security: Critical Infrastructure Protection	**$35,230.0**	**$24,850.0**	**$35,569.0**	**$10,719.0**
EPM	$7,787.0	$7,665.0	$6,759.0	($906.0)
S&T	$25,586.0	$15,357.0	$27,131.0	$11,774.0
Superfund	$1,857.0	$1,828.0	$1,679.0	($149.0)
Homeland Security: Preparedness, Response, and Recovery	**$89,429.0**	**$86,151.0**	**$106,298.0**	**$20,147.0**
EPM	$3,381.0	$3,329.0	$3,412.0	$83.0
S&T	$40,768.0	$38,193.0	$46,210.0	$8,017.0
Superfund	$45,280.0	$44,629.0	$56,676.0	$12,047.0
Homeland Security: Protection of EPA Personnel and Infrastructure	**$15,403.0**	**$15,165.0**	**$16,273.0**	**$1,108.0**
B&F	$7,870.0	$7,747.0	$8,070.0	$323.0
EPM	$6,345.0	$6,248.0	$6,415.0	$167.0
S&T	$594.0	$585.0	$594.0	$9.0
Superfund	$594.0	$585.0	$1,194.0	$609.0
Human Health Risk Assessment	**$42,828.0**	**$42,244.0**	**$42,648.0**	**$404.0**
S&T	$38,856.0	$38,334.0	$39,323.0	$989.0
Superfund	$3,972.0	$3,910.0	$3,325.0	($585.0)
Human Resources Management	**$45,214.0**	**$44,732.0**	**$48,712.0**	**$3,980.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
EPM	$40,175.0	$39,760.0	$43,646.0	$3,886.0
LUST	$3.0	$3.0	$3.0	$0.0
Superfund	$5,036.0	$4,969.0	$5,063.0	$94.0
IT / Data Management	**$111,067.0**	**$110,496.0**	**$115,277.0**	**$4,781.0**
EPM	$91,019.0	$90,753.0	$94,360.0	$3,607.0
LUST	$177.0	$174.0	$162.0	($12.0)
Oil Spills	$34.0	$33.0	$24.0	($9.0)
S&T	$3,499.0	$3,453.0	$3,859.0	$406.0
Superfund	$16,338.0	$16,083.0	$16,872.0	$789.0
Indoor Air: Radon Program	**$5,857.0**	**$5,785.0**	**$5,929.0**	**$144.0**
EPM	$5,429.0	$5,363.0	$5,488.0	$125.0
S&T	$428.0	$422.0	$441.0	$19.0
Information Security	**$6,375.0**	**$6,284.0**	**$6,591.0**	**$307.0**
EPM	$5,583.0	$5,504.0	$5,790.0	$286.0
Superfund	$792.0	$780.0	$801.0	$21.0
Infrastructure Assistance: Alaska Native Villages	**$15,500.0**	**$24,610.0**	**$15,500.0**	**($9,110.0)**
STAG	$15,500.0	$24,610.0	$15,500.0	($9,110.0)
Infrastructure Assistance: Clean Water SRF	**$687,554.0**	**$689,080.0**	**$555,000.0**	**($134,080.0)**
STAG	$687,554.0	$689,080.0	$555,000.0	($134,080.0)
Infrastructure Assistance: Drinking Water SRF	**$842,167.0**	**$829,029.0**	**$842,167.0**	**$13,138.0**
STAG	$842,167.0	$829,029.0	$842,167.0	$13,138.0
Infrastructure Assistance: Mexico	**$10,000.0**	**$19,688.0**	**$10,000.0**	**($9,688.0)**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Border				
STAG	$10,000.0	$19,688.0	$10,000.0	($9,688.0)
International Capacity Building	**$5,311.0**	**$5,228.0**	**$0.0**	**($5,228.0)**
EPM	$5,311.0	$5,228.0	$0.0	($5,228.0)
International Sources of Pollution	**$0.0**	**$0.0**	**$12,408.0**	**$12,408.0**
EPM	$0.0	$0.0	$12,408.0	$12,408.0
LUST / UST	**$22,277.0**	**$23,540.0**	**$22,804.0**	**($736.0)**
EPM	$11,719.0	$11,572.0	$12,256.0	$684.0
LUST	$10,558.0	$11,968.0	$10,548.0	($1,420.0)
LUST Cooperative Agreements	**$58,207.0**	**$90,178.0**	**$58,207.0**	**($31,971.0)**
LUST	$58,207.0	$90,178.0	$58,207.0	($31,971.0)
Legal Advice: Environmental Program	**$39,972.0**	**$40,220.0**	**$40,556.0**	**$336.0**
EPM	$39,366.0	$39,480.0	$39,925.0	$445.0
Superfund	$606.0	$740.0	$631.0	($109.0)
Legal Advice: Support Program	**$13,986.0**	**$14,117.0**	**$14,442.0**	**$325.0**
EPM	$13,986.0	$14,117.0	$14,442.0	$325.0
Marine Pollution	**$12,851.0**	**$12,674.0**	**$13,185.0**	**$511.0**
EPM	$12,851.0	$12,674.0	$13,185.0	$511.0
NEPA Implementation	**$14,366.0**	**$14,142.0**	**$16,295.0**	**$2,153.0**
EPM	$14,366.0	$14,142.0	$16,295.0	$2,153.0
National Estuary Program / Coastal	**$17,203.0**	**$26,779.0**	**$17,239.0**	**($9,540.0)**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Waterways				
EPM	$17,203.0	$26,779.0	$17,239.0	($9,540.0)
Not Specified	**($5,000.0)**	**($5,000.0)**	**($10,000.0)**	**($5,000.0)**
Rescissions	($5,000.0)	($5,000.0)	($10,000.0)	($5,000.0)
Oil Spill: Prevention, Preparedness and Response	**$13,499.0**	**$13,290.0**	**$13,927.0**	**$637.0**
Oil Spills	$13,499.0	$13,290.0	$13,927.0	$637.0
POPs Implementation	**$1,831.0**	**$1,808.0**	**$0.0**	**($1,808.0)**
EPM	$1,831.0	$1,808.0	$0.0	($1,808.0)
Pesticides: Protect Human Health from Pesticide Risk	**$65,808.0**	**$65,069.0**	**$64,059.0**	**($1,010.0)**
EPM	$62,514.0	$61,819.0	$60,606.0	($1,213.0)
S&T	$3,294.0	$3,250.0	$3,453.0	$203.0
Pesticides: Protect the Environment from Pesticide Risk	**$43,865.0**	**$43,301.0**	**$43,431.0**	**$130.0**
EPM	$41,750.0	$41,214.0	$41,215.0	$1.0
S&T	$2,115.0	$2,087.0	$2,216.0	$129.0
Pesticides: Realize the Value of Pesticide Availability	**$12,586.0**	**$12,424.0**	**$13,365.0**	**$941.0**
EPM	$12,114.0	$11,959.0	$12,870.0	$911.0
S&T	$472.0	$465.0	$495.0	$30.0
Pollution Prevention Program	**$19,935.0**	**$16,362.0**	**$18,398.0**	**$2,036.0**
EPM	$19,935.0	$16,362.0	$18,398.0	$2,036.0
RCRA: Corrective Action	**$39,573.0**	**$39,076.0**	**$39,018.0**	**($58.0)**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
EPM	$39,573.0	$39,076.0	$39,018.0	($58.0)
RCRA: Waste Management	**$69,158.0**	**$66,297.0**	**$67,111.0**	**$814.0**
EPM	$69,158.0	$66,297.0	$67,111.0	$814.0
RCRA: Waste Minimization & Recycling	**$13,666.0**	**$13,495.0**	**$14,397.0**	**$902.0**
EPM	$13,666.0	$13,495.0	$14,397.0	$902.0
Radiation: Protection	**$14,679.0**	**$14,486.0**	**$15,056.0**	**$570.0**
EPM	$10,186.0	$10,057.0	$10,533.0	$476.0
S&T	$2,120.0	$2,087.0	$2,109.0	$22.0
Superfund	$2,373.0	$2,342.0	$2,414.0	$72.0
Radiation: Response Preparedness	**$6,649.0**	**$6,561.0**	**$6,957.0**	**$396.0**
EPM	$2,928.0	$2,882.0	$2,941.0	$59.0
S&T	$3,721.0	$3,679.0	$4,016.0	$337.0
Reduce Risks from Indoor Air	**$22,228.0**	**$22,409.0**	**$19,970.0**	**($2,439.0)**
EPM	$21,440.0	$21,632.0	$19,180.0	($2,452.0)
S&T	$788.0	$777.0	$790.0	$13.0
Regional Geographic Initiatives	**$9,553.0**	**$0.0**	**$4,844.0**	**$4,844.0**
EPM	$9,553.0	$0.0	$4,844.0	$4,844.0
Regional Science and Technology	**$3,574.0**	**$3,518.0**	**$3,318.0**	**($200.0)**
EPM	$3,574.0	$3,518.0	$3,318.0	($200.0)
Regulatory Innovation	**$23,866.0**	**$21,327.0**	**$24,405.0**	**$3,078.0**
EPM	$23,866.0	$21,327.0	$24,405.0	$3,078.0

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Regulatory/Economic-Management and Analysis	**$20,104.0**	**$16,381.0**	**$20,588.0**	**$4,207.0**
EPM	$20,104.0	$16,381.0	$20,588.0	$4,207.0
Research: Computational Toxicology	**$15,103.0**	**$12,135.0**	**$14,863.0**	**$2,728.0**
S&T	$15,103.0	$12,135.0	$14,863.0	$2,728.0
Research: Drinking Water	**$48,548.0**	**$48,775.0**	**$45,283.0**	**($3,492.0)**
S&T	$48,548.0	$48,775.0	$45,283.0	($3,492.0)
Research: Endocrine Disruptor	**$10,131.0**	**$10,317.0**	**$9,502.0**	**($815.0)**
S&T	$10,131.0	$10,317.0	$9,502.0	($815.0)
Research: Fellowships	**$8,438.0**	**$9,845.0**	**$8,887.0**	**($958.0)**
S&T	$8,438.0	$9,845.0	$8,887.0	($958.0)
Research: Global Change	**$16,908.0**	**$19,688.0**	**$16,365.0**	**($3,323.0)**
S&T	$16,908.0	$19,688.0	$16,365.0	($3,323.0)
Research: Human Health and Ecosystems	**$145,046.0**	**$153,032.0**	**$144,742.0**	**($8,290.0)**
S&T	$145,046.0	$153,032.0	$144,742.0	($8,290.0)
Research: Land Protection and Restoration	**$32,379.0**	**$31,896.0**	**$35,488.0**	**$3,592.0**
LUST	$660.0	$650.0	$413.0	($237.0)
Oil Spills	$901.0	$887.0	$704.0	($183.0)
S&T	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Superfund	$20,081.0	$19,768.0	$21,021.0	$1,253.0

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Research: Pesticides and Toxics	**$24,795.0**	**$24,459.0**	**$26,568.0**	**$2,109.0**
S&T	$24,795.0	$24,459.0	$26,568.0	$2,109.0
Research: Water Quality	**$56,454.0**	**$55,573.0**	**$56,179.0**	**$606.0**
S&T	$56,454.0	$55,573.0	$56,179.0	$606.0
Research: Clean Air	**$81,054.0**	**$79,993.0**	**$80,588.0**	**$595.0**
S&T	$81,054.0	$79,993.0	$80,588.0	$595.0
Research: Sustainability	**$22,478.0**	**$22,127.0**	**$19,970.0**	**($2,157.0)**
S&T	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Science Advisory Board	**$4,790.0**	**$4,727.0**	**$5,083.0**	**$356.0**
EPM	$4,790.0	$4,727.0	$5,083.0	$356.0
Science Policy and Biotechnology	**$1,780.0**	**$1,752.0**	**$1,675.0**	**($77.0)**
EPM	$1,780.0	$1,752.0	$1,675.0	($77.0)
Small Business Ombudsman	**$3,261.0**	**$3,210.0**	**$3,217.0**	**$7.0**
EPM	$3,261.0	$3,210.0	$3,217.0	$7.0
Small Minority Business Assistance	**$2,466.0**	**$2,428.0**	**$2,411.0**	**($17.0)**
EPM	$2,466.0	$2,428.0	$2,411.0	($17.0)
State and Local Prevention and Preparedness	**$12,960.0**	**$12,784.0**	**$13,298.0**	**$514.0**
EPM	$12,960.0	$12,784.0	$13,298.0	$514.0
Stratospheric Ozone: Domestic Programs	**$4,489.0**	**$5,119.0**	**$4,696.0**	**($423.0)**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
EPM	$4,489.0	$5,119.0	$4,696.0	($423.0)
Stratospheric Ozone: Multilateral Fund	**$9,865.0**	**$9,711.0**	**$9,865.0**	**$154.0**
EPM	$9,865.0	$9,711.0	$9,865.0	$154.0
Superfund: EPA Emergency Preparedness	**$9,318.0**	**$9,195.0**	**$9,504.0**	**$309.0**
Superfund	$9,318.0	$9,195.0	$9,504.0	$309.0
Superfund: Emergency Response and Removal	**$191,880.0**	**$190,011.0**	**$193,853.0**	**$3,842.0**
Superfund	$191,880.0	$190,011.0	$193,853.0	$3,842.0
Superfund: Enforcement	**$161,610.0**	**$164,845.0**	**$163,678.0**	**($1,167.0)**
Superfund	$161,610.0	$164,845.0	$163,678.0	($1,167.0)
Superfund: Federal Facilities	**$31,879.0**	**$31,447.0**	**$31,440.0**	**($7.0)**
Superfund	$31,879.0	$31,447.0	$31,440.0	($7.0)
Superfund: Remedial	**$584,836.0**	**$591,078.0**	**$586,120.0**	**($4,958.0)**
Superfund	$584,836.0	$591,078.0	$586,120.0	($4,958.0)
Superfund: Support to Other Federal Agencies	**$6,575.0**	**$6,472.0**	**$6,575.0**	**$103.0**
Superfund	$6,575.0	$6,472.0	$6,575.0	$103.0
Superfund: Federal Facilities Enforcement	**$9,843.0**	**$9,726.0**	**$10,225.0**	**$499.0**
Superfund	$9,843.0	$9,726.0	$10,225.0	$499.0
Surface Water Protection	**$196,092.0**	**$193,546.0**	**$198,706.0**	**$5,160.0**

	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
EPM	$196,092.0	$193,546.0	$198,706.0	$5,160.0
TRI / Right to Know	**$15,728.0**	**$15,504.0**	**$15,109.0**	**($395.0)**
EPM	$15,728.0	$15,504.0	$15,109.0	($395.0)
Toxic Substances: Chemical Risk Management	**$5,654.0**	**$5,585.0**	**$6,027.0**	**$442.0**
EPM	$5,654.0	$5,585.0	$6,027.0	$442.0
Toxic Substances: Chemical Risk Review and Reduction	**$45,046.0**	**$45,672.0**	**$46,477.0**	**$805.0**
EPM	$45,046.0	$45,672.0	$46,477.0	$805.0
Toxic Substances: Lead Risk Reduction Program	**$13,546.0**	**$13,335.0**	**$13,652.0**	**$317.0**
EPM	$13,546.0	$13,335.0	$13,652.0	$317.0
Trade and Governance	**$0.0**	**$0.0**	**$6,216.0**	**$6,216.0**
EPM	$0.0	$0.0	$6,216.0	$6,216.0
Tribal - Capacity Building	**$11,477.0**	**$11,328.0**	**$11,710.0**	**$382.0**
EPM	$11,477.0	$11,328.0	$11,710.0	$382.0
US Mexico Border	**$4,646.0**	**$5,439.0**	**$0.0**	**($5,439.0)**
EPM	$4,646.0	$5,439.0	$0.0	($5,439.0)
Wetlands	**$21,518.0**	**$21,248.0**	**$22,223.0**	**$975.0**
EPM	$21,518.0	$21,248.0	$22,223.0	$975.0
TOTAL, EPA	**$7,199,400.0**	**$7,472,324.0**	**$7,142,520.0**	**($329,804.0)**

PROGRAM PROJECTS BY PROGRAM AREA
(Dollars in Thousands)

Science & Technology	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Air Toxics and Quality					
Clean Air Allowance Trading Programs	$8,661.1	$8,259.0	$9,115.0	$8,259.0	($856.0)
Federal Support for Air Quality Management	$9,104.1	$10,886.0	$12,118.0	$11,086.0	($1,032.0)
Federal Support for Air Toxics Program	$1,804.1	$2,252.0	$2,220.0	$2,303.0	$83.0
Federal Vehicle and Fuels Standards and Certification	$58,196.0	$65,722.0	$66,796.0	$69,543.0	$2,747.0
Radiation: Protection	$2,126.1	$2,120.0	$2,087.0	$2,109.0	$22.0
Radiation: Response Preparedness	$3,375.6	$3,721.0	$3,679.0	$4,016.0	$337.0
Subtotal, Air Toxics and Quality	**$83,267.0**	**$92,960.0**	**$96,015.0**	**$97,316.0**	**$1,301.0**
Climate Protection Program					
Climate Protection Program	$14,624.1	$13,104.0	$18,331.0	$11,402.0	($6,929.0)
Enforcement					
Forensics Support	$13,949.3	$15,075.0	$14,882.0	$15,557.0	$675.0
Homeland Security					
Homeland Security: Critical Infrastructure Protection					
Water Sentinel	$3,183.6	$21,884.0	$11,705.0	$22,637.0	$10,932.0
Homeland Security: Critical Infrastructure Protection (other activities)	$7,391.8	$3,702.0	$3,652.0	$4,494.0	$842.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$10,575.4	$25,586.0	$15,357.0	$27,131.0	$11,774.0
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	$21,025.2	$20,738.0	$20,444.0	$28,805.0	$8,361.0
Laboratory Preparedness and Response	$618.6	$600.0	$591.0	$500.0	($91.0)
Safe Buildings	$4,242.2	$4,000.0	$1,969.0	$2,000.0	$31.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$13,117.6	$15,430.0	$15,189.0	$14,905.0	($284.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$39,003.6	$40,768.0	$38,193.0	$46,210.0	$8,017.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$2,023.9	$594.0	$585.0	$594.0	$9.0
Subtotal, Homeland Security	**$51,602.9**	**$66,948.0**	**$54,135.0**	**$73,935.0**	**$19,800.0**
Indoor Air					

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Indoor Air: Radon Program	$434.1	$428.0	$422.0	$441.0	$19.0
Reduce Risks from Indoor Air	$791.2	$788.0	$777.0	$790.0	$13.0
Subtotal, Indoor Air	**$1,225.3**	**$1,216.0**	**$1,199.0**	**$1,231.0**	**$32.0**
IT / Data Management / Security					
IT / Data Management	$4,522.1	$3,499.0	$3,453.0	$3,859.0	$406.0
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$13,085.0	$35,521.0	$34,967.0	$35,521.0	$554.0
Utilities	$9,110.1	$18,392.0	$18,105.0	$18,547.0	$442.0
Security	$3,403.6	$11,179.0	$11,005.0	$11,989.0	$984.0
Facilities Infrastructure and Operations (other activities)	$7,287.5	$8,767.0	$8,630.0	$8,827.0	$197.0
Subtotal, Facilities Infrastructure and Operations	$32,886.2	$73,859.0	$72,707.0	$74,884.0	$2,177.0
Subtotal, Operations and Administration	**$32,886.2**	**$73,859.0**	**$72,707.0**	**$74,884.0**	**$2,177.0**
Pesticides Licensing					
Pesticides: Protect Human Health from Pesticide Risk	$0.0	$3,294.0	$3,250.0	$3,453.0	$203.0
Pesticides: Protect the Environment from Pesticide Risk	$0.0	$2,115.0	$2,087.0	$2,216.0	$129.0
Pesticides: Realize the Value of Pesticide Availability	$0.0	$472.0	$465.0	$495.0	$30.0
Pesticides: Registration of New Pesticides	$2,570.3	$0.0	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$2,885.8	$0.0	$0.0	$0.0	$0.0
Subtotal, Pesticides Licensing	**$5,456.1**	**$5,881.0**	**$5,802.0**	**$6,164.0**	**$362.0**
Research: Clean Air					
Research: Air Toxics	$13,521.3	$0.0	$0.0	$0.0	$0.0
Research: Clean Air	$0.0	$81,054.0	$79,993.0	$80,588.0	$595.0
Research: Global Change	$20,449.9	$16,908.0	$19,688.0	$16,365.0	($3,323.0)
Research: NAAQS	$61,664.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Clean Air	**$95,635.2**	**$97,962.0**	**$99,681.0**	**$96,953.0**	**($2,728.0)**
Research: Clean Water					
Research: Drinking Water	$44,342.9	$48,548.0	$48,775.0	$45,283.0	($3,492.0)
Research: Water Quality	$54,428.5	$56,454.0	$55,573.0	$56,179.0	$606.0
Subtotal, Research: Clean Water	**$98,771.4**	**$105,002.0**	**$104,348.0**	**$101,462.0**	**($2,886.0)**

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Research / Congressional Priorities					
Congressionally Mandated Projects	$16,456.4	$0.0	$5,316.0	$0.0	($5,316.0)
Research: Human Health and Ecosystems					
Human Health Risk Assessment	$35,018.0	$38,856.0	$38,334.0	$39,323.0	$989.0
Research: Computational Toxicology	$12,159.5	$15,103.0	$12,135.0	$14,863.0	$2,728.0
Research: Endocrine Disruptor	$10,476.7	$10,131.0	$10,317.0	$9,502.0	($815.0)
Research: Fellowships	$12,231.1	$8,438.0	$9,845.0	$8,887.0	($958.0)
Research: Human Health and Ecosystems					
Human Health	$0.0	$72,285.0	$77,260.0	$74,752.0	($2,508.0)
Ecosystems	$0.0	$72,761.0	$75,772.0	$69,990.0	($5,782.0)
Research: Human Health and Ecosystems (other activities)	$167,910.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Human Health and Ecosystems	$167,910.0	$145,046.0	$153,032.0	$144,742.0	($8,290.0)
Subtotal, Research: Human Health and Ecosystems	**$237,795.3**	**$217,574.0**	**$223,663.0**	**$217,317.0**	**($6,346.0)**
Research: Land Protection					
Research: Land Protection and Restoration	$10,907.3	$10,737.0	$10,591.0	$13,350.0	$2,759.0
Research: Sustainability					
Research: Economics and Decision Science(EDS)	$2,284.9	$0.0	$0.0	$0.0	$0.0
Research: Environmental Technology Verification (ETV)	$1,410.1	$0.0	$0.0	$0.0	$0.0
Research: Sustainability	$24,864.5	$22,478.0	$22,127.0	$19,970.0	($2,157.0)
Subtotal, Research: Sustainability	**$28,559.5**	**$22,478.0**	**$22,127.0**	**$19,970.0**	**($2,157.0)**
Toxic Research and Prevention					
Research: Pesticides and Toxics	$29,425.2	$24,795.0	$24,459.0	$26,568.0	$2,109.0
Water: Human Health Protection					
Drinking Water Programs	$3,256.6	$3,416.0	$3,375.0	$3,559.0	$184.0
Total, Science & Technology	**$728,339.9**	**$754,506.0**	**$760,084.0**	**$763,527.0**	**$3,443.0**
Environmental Program & Management					
Air Toxics and Quality					
Clean Air Allowance Trading Programs	$18,621.2	$19,388.0	$19,131.0	$19,898.0	$767.0
Federal Stationary Source Regulations	$22,744.8	$26,504.0	$26,091.0	$26,787.0	$696.0
Federal Support for Air Quality Management					
Clean Diesel Initiative	$97.9	$0.0	$0.0	$0.0	$0.0

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Federal Support for Air Quality Management (other activities)	$95,478.1	$90,490.0	$89,464.0	$95,538.0	$6,074.0
Subtotal, Federal Support for Air Quality Management	$95,576.0	$90,490.0	$89,464.0	$95,538.0	$6,074.0
Federal Support for Air Toxics Program	$25,081.8	$24,711.0	$24,390.0	$22,693.0	($1,697.0)
Radiation: Protection	$10,172.7	$10,186.0	$10,057.0	$10,533.0	$476.0
Radiation: Response Preparedness	$2,809.7	$2,928.0	$2,882.0	$2,941.0	$59.0
Stratospheric Ozone: Domestic Programs	$5,280.0	$4,489.0	$5,119.0	$4,696.0	($423.0)
Stratospheric Ozone: Multilateral Fund	$11,315.0	$9,865.0	$9,711.0	$9,865.0	$154.0
Subtotal, Air Toxics and Quality	**$191,601.2**	**$188,561.0**	**$186,845.0**	**$192,951.0**	**$6,106.0**
Brownfields					
Brownfields	$25,838.4	$23,450.0	$23,665.0	$22,732.0	($933.0)
Climate Protection Program					
Climate Protection Program					
Energy STAR	$38,573.4	$43,926.0	$48,236.0	$44,221.0	($4,015.0)
Methane to markets	$2,351.1	$4,436.0	$4,369.0	$4,546.6	$177.6
Asian Pacific Partnership	$3,203.0	$5,000.0	$0.0	$5,000.0	$5,000.0
Greenhouse Gas Reporting Registry	$0.0	$0.0	$3,445.0	$0.0	($3,445.0)
Climate Protection Program (other activities)	$47,124.6	$34,565.0	$34,324.0	$33,240.4	($1,083.6)
Subtotal, Climate Protection Program	$91,252.1	$87,927.0	$90,374.0	$87,008.0	($3,366.0)
Subtotal, Climate Protection Program	**$91,252.1**	**$87,927.0**	**$90,374.0**	**$87,008.0**	**($3,366.0)**
Compliance					
Compliance Assistance and Centers	$28,226.9	$29,547.0	$27,725.0	$26,435.0	($1,290.0)
Compliance Incentives	$9,448.8	$9,786.0	$10,618.0	$10,263.0	($355.0)
Compliance Monitoring	$90,724.6	$93,428.0	$88,726.0	$96,025.0	$7,299.0
Subtotal, Compliance	**$128,400.3**	**$132,761.0**	**$127,069.0**	**$132,723.0**	**$5,654.0**
Enforcement					
Civil Enforcement	$123,003.7	$126,645.0	$129,886.0	$133,017.0	$3,131.0
Criminal Enforcement	$39,721.6	$39,688.0	$40,742.0	$44,384.0	$3,642.0
Enforcement Training	$2,668.3	$3,145.0	$3,096.0	$3,043.0	($53.0)
Environmental Justice	$6,319.2	$3,822.0	$6,399.0	$3,811.0	($2,588.0)
NEPA Implementation	$13,863.5	$14,366.0	$14,142.0	$16,295.0	$2,153.0
Subtotal, Enforcement	**$185,576.3**	**$187,666.0**	**$194,265.0**	**$200,550.0**	**$6,285.0**
Environmental Protection / Congressional Priorities					
Congressionally Mandated Projects	$25,478.3	$0.0	$13,437.0	$0.0	($13,437.0)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Geographic Programs					
Geographic Program: Chesapeake Bay	$20,274.1	$28,768.0	$30,528.0	$29,001.0	($1,527.0)
Geographic Program: Great Lakes	$23,522.7	$21,757.0	$21,686.0	$22,261.0	$575.0
Geographic Program: Long Island Sound	$1,361.4	$467.0	$4,922.0	$467.0	($4,455.0)
Geographic Program: Gulf of Mexico	$4,407.4	$4,457.0	$5,618.0	$4,578.0	($1,040.0)
Geographic Program: Lake Champlain	$997.0	$934.0	$2,707.0	$934.0	($1,773.0)
Geographic Program: Other					
San Francisco Bay	$0.0	$0.0	$4,922.0	$0.0	($4,922.0)
Geographic Program: Puget Sound	$1,162.3	$1,000.0	$19,688.0	$1,000.0	($18,688.0)
Lake Pontchartrain	$969.4	$978.0	$963.0	$978.0	$15.0
Community Action for a Renewed Environment (CARE)	$2,515.0	$3,448.0	$3,394.0	$2,448.0	($946.0)
Geographic Program: Other (other activities)	$5,057.5	$3,149.0	$3,105.0	$3,289.0	$184.0
Subtotal, Geographic Program: Other	$9,704.2	$8,575.0	$32,072.0	$7,715.0	($24,357.0)
Regional Geographic Initiatives	$6,302.5	$9,553.0	$0.0	$4,844.0	$4,844.0
Subtotal, Geographic Programs	**$66,569.3**	**$74,511.0**	**$97,533.0**	**$69,800.0**	**($27,733.0)**
Homeland Security					
Homeland Security: Communication and Information					
Laboratory Preparedness and Response	$888.7	$500.0	$492.0	$0.0	($492.0)
Homeland Security: Communication and Information (other activities)	$7,230.3	$6,406.0	$6,330.0	$6,940.0	$610.0
Subtotal, Homeland Security: Communication and Information	$8,119.0	$6,906.0	$6,822.0	$6,940.0	$118.0
Homeland Security: Critical Infrastructure Protection					
Decontamination	$52.8	$99.0	$97.0	$99.0	$2.0
Homeland Security: Critical Infrastructure Protection (other activities)	$9,502.7	$7,688.0	$7,568.0	$6,660.0	($908.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	$9,555.5	$7,787.0	$7,665.0	$6,759.0	($906.0)
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	($2.5)	$3,380.0	$3,329.0	$3,412.0	$83.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$3,396.8	$1.0	$0.0	$0.0	$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$3,394.3	$3,381.0	$3,329.0	$3,412.0	$83.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$6,219.1	$6,345.0	$6,248.0	$6,415.0	$167.0
Subtotal, Homeland Security	**$27,287.9**	**$24,419.0**	**$24,064.0**	**$23,526.0**	**($538.0)**

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Indoor Air					
Indoor Air: Radon Program	$5,201.2	$5,429.0	$5,363.0	$5,488.0	$125.0
Reduce Risks from Indoor Air	$21,425.6	$21,440.0	$21,632.0	$19,180.0	($2,452.0)
Subtotal, Indoor Air	**$26,626.8**	**$26,869.0**	**$26,995.0**	**$24,668.0**	**($2,327.0)**
Information Exchange / Outreach					
Children and Other Sensitive Populations: Agency Coordination	$4,968.5	$6,203.0	$6,144.0	$6,309.0	$165.0
Environmental Education	$7,807.2	$0.0	$8,860.0	$0.0	($8,860.0)
Congressional, Intergovernmental, External Relations	$49,193.3	$49,747.0	$48,971.0	$49,756.0	$785.0
Exchange Network	$17,541.7	$15,364.0	$15,137.0	$18,058.0	$2,921.0
Small Business Ombudsman	$3,761.9	$3,261.0	$3,210.0	$3,217.0	$7.0
Small Minority Business Assistance	$2,437.3	$2,466.0	$2,428.0	$2,411.0	($17.0)
State and Local Prevention and Preparedness	$12,867.6	$12,960.0	$12,784.0	$13,298.0	$514.0
TRI / Right to Know	$14,605.5	$15,728.0	$15,504.0	$15,109.0	($395.0)
Tribal - Capacity Building	$10,861.3	$11,477.0	$11,328.0	$11,710.0	$382.0
Subtotal, Information Exchange / Outreach	**$124,044.3**	**$117,206.0**	**$124,366.0**	**$119,868.0**	**($4,498.0)**
International Programs					
US Mexico Border	$5,790.7	$4,646.0	$5,439.0	$0.0	($5,439.0)
Commission for Environmental Cooperation	$4,208.8	$4,022.0	$3,962.0	$0.0	($3,962.0)
Environment and Trade	$1,817.4	$1,945.0	$1,920.0	$0.0	($1,920.0)
International Capacity Building	$7,210.8	$5,311.0	$5,228.0	$0.0	($5,228.0)
POPs Implementation	$1,682.4	$1,831.0	$1,808.0	$0.0	($1,808.0)
International Sources of Pollution					
Mexico Border	$0.0	$0.0	$0.0	$4,902.0	$4,902.0
International Sources of Pollution (other activities)	$0.0	$0.0	$0.0	$7,506.0	$7,506.0
Subtotal, International Sources of Pollution	$0.0	$0.0	$0.0	$12,408.0	$12,408.0
Trade and Governance	$0.0	$0.0	$0.0	$6,216.0	$6,216.0
Subtotal, International Programs	**$20,710.1**	**$17,755.0**	**$18,357.0**	**$18,624.0**	**$267.0**
IT / Data Management / Security					
Information Security	$4,291.9	$5,583.0	$5,504.0	$5,790.0	$286.0
IT / Data Management	$99,196.3	$91,019.0	$90,753.0	$94,360.0	$3,607.0
Subtotal, IT / Data Management / Security	**$103,488.2**	**$96,602.0**	**$96,257.0**	**$100,150.0**	**$3,893.0**
Legal / Science / Regulatory / Economic Review					
Administrative Law	$4,891.0	$5,260.0	$5,178.0	$4,949.0	($229.0)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Alternative Dispute Resolution	$970.5	$1,175.0	$1,160.0	$1,264.0	$104.0
Civil Rights / Title VI Compliance	$10,796.0	$11,240.0	$11,065.0	$11,097.0	$32.0
Legal Advice: Environmental Program	$38,242.4	$39,366.0	$39,480.0	$39,925.0	$445.0
Legal Advice: Support Program	$12,435.8	$13,986.0	$14,117.0	$14,442.0	$325.0
Regional Science and Technology	$3,399.8	$3,574.0	$3,518.0	$3,318.0	($200.0)
Regulatory Innovation	$22,498.4	$23,866.0	$21,327.0	$24,405.0	$3,078.0
Regulatory/Economic-Management and Analysis	$17,755.0	$20,104.0	$16,381.0	$20,588.0	$4,207.0
Science Advisory Board	$4,983.3	$4,790.0	$4,727.0	$5,083.0	$356.0
Subtotal, Legal / Science / Regulatory / Economic Review	**$115,972.2**	**$123,361.0**	**$116,953.0**	**$125,071.0**	**$8,118.0**
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$176,479.1	$165,817.0	$161,261.0	$164,866.0	$3,605.0
Utilities	$14,682.7	$8,210.0	$8,082.0	$11,333.0	$3,251.0
Security	$28,897.4	$25,344.0	$24,949.0	$25,676.0	$727.0
Facilities Infrastructure and Operations (other activities)	$107,894.9	$104,357.0	$102,897.0	$109,193.0	$6,296.0
Subtotal, Facilities Infrastructure and Operations	$327,954.1	$303,728.0	$297,189.0	$311,068.0	$13,879.0
Central Planning, Budgeting, and Finance	$64,431.2	$74,960.0	$73,949.0	$80,623.0	$6,674.0
Acquisition Management	$23,654.1	$29,992.0	$28,629.0	$31,195.0	$2,566.0
Financial Assistance Grants / IAG Management	$20,564.5	$23,439.0	$23,242.0	$25,977.0	$2,735.0
Human Resources Management	$39,740.2	$40,175.0	$39,760.0	$43,646.0	$3,886.0
Subtotal, Operations and Administration	**$476,344.1**	**$472,294.0**	**$462,769.0**	**$492,509.0**	**$29,740.0**
Pesticides Licensing					
Pesticides: Protect Human Health from Pesticide Risk	$0.0	$62,514.0	$61,819.0	$60,606.0	($1,213.0)
Pesticides: Protect the Environment from Pesticide Risk	$0.0	$41,750.0	$41,214.0	$41,215.0	$1.0
Pesticides: Realize the Value of Pesticide Availability	$0.0	$12,114.0	$11,959.0	$12,870.0	$911.0
Pesticides: Field Programs	$21,436.3	$0.0	$0.0	$0.0	$0.0
Pesticides: Registration of New Pesticides	$42,098.9	$0.0	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$54,442.2	$0.0	$0.0	$0.0	$0.0
Science Policy and Biotechnology	$1,202.9	$1,780.0	$1,752.0	$1,675.0	($77.0)
Subtotal, Pesticides Licensing	**$119,180.3**	**$118,158.0**	**$116,744.0**	**$116,366.0**	**($378.0)**
Resource Conservation and Recovery Act (RCRA)					
RCRA: Waste Management					

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
eManifest	$0.0	$4,000.0	$0.0	$2,000.0	$2,000.0
RCRA: Waste Management (other activities)	$65,599.8	$65,158.0	$66,297.0	$65,111.0	($1,186.0)
Subtotal, RCRA: Waste Management	$65,599.8	$69,158.0	$66,297.0	$67,111.0	$814.0
RCRA: Corrective Action	$39,373.3	$39,573.0	$39,076.0	$39,018.0	($58.0)
RCRA: Waste Minimization & Recycling	$12,506.2	$13,666.0	$13,495.0	$14,397.0	$902.0
Subtotal, Resource Conservation and Recovery Act (RCRA)	**$117,479.3**	**$122,397.0**	**$118,868.0**	**$120,526.0**	**$1,658.0**
Toxics Risk Review and Prevention					
Endocrine Disruptors	$9,855.8	$5,890.0	$8,663.0	$5,847.0	($2,816.0)
Toxic Substances: Chemical Risk Review and Reduction					
HPV/VCCEP	$12,239.0	$11,015.0	$12,049.0	$11,381.0	($668.0)
Toxic Substances: Chemical Risk Review and Reduction (other activities)	$32,462.7	$34,031.0	$33,623.0	$35,096.0	$1,473.0
Subtotal, Toxic Substances: Chemical Risk Review and Reduction	$44,701.7	$45,046.0	$45,672.0	$46,477.0	$805.0
Pollution Prevention Program	$17,548.6	$19,935.0	$16,362.0	$18,398.0	$2,036.0
Toxic Substances: Chemical Risk Management	$8,249.6	$5,654.0	$5,585.0	$6,027.0	$442.0
Toxic Substances: Lead Risk Reduction Program	$12,589.8	$13,546.0	$13,335.0	$13,652.0	$317.0
Subtotal, Toxics Risk Review and Prevention	**$92,945.5**	**$90,071.0**	**$89,617.0**	**$90,401.0**	**$784.0**
Underground Storage Tanks (LUST / UST)					
LUST / UST	$9,836.7	$11,719.0	$11,572.0	$12,256.0	$684.0
Water: Ecosystems					
Great Lakes Legacy Act	$24,296.7	$35,000.0	$34,454.0	$35,000.0	$546.0
National Estuary Program / Coastal Waterways	$21,474.8	$17,203.0	$26,779.0	$17,239.0	($9,540.0)
Wetlands	$19,641.9	$21,518.0	$21,248.0	$22,223.0	$975.0
Subtotal, Water: Ecosystems	**$65,413.4**	**$73,721.0**	**$82,481.0**	**$74,462.0**	**($8,019.0)**
Water: Human Health Protection					
Beach / Fish Programs	$2,821.4	$2,830.0	$2,789.0	$2,795.0	$6.0
Drinking Water Programs	$100,323.2	$96,967.0	$96,722.0	$99,476.0	$2,754.0
Subtotal, Water: Human Health Protection	**$103,144.6**	**$99,797.0**	**$99,511.0**	**$102,271.0**	**$2,760.0**
Water Quality Protection					
Marine Pollution	$12,890.5	$12,851.0	$12,674.0	$13,185.0	$511.0
Surface Water Protection	$191,797.2	$196,092.0	$193,546.0	$198,706.0	$5,160.0
Subtotal, Water Quality Protection	**$204,687.7**	**$208,943.0**	**$206,220.0**	**$211,891.0**	**$5,671.0**

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Total, Environmental Program & Management	**$2,321,877.0**	**$2,298,188.0**	**$2,327,962.0**	**$2,338,353.0**	**$10,391.0**
Inspector General					
Audits, Evaluations, and Investigations					
Audits, Evaluations, and Investigations	$32,288.4	$38,008.0	$41,099.0	$39,483.0	($1,616.0)
Total, Inspector General	**$32,288.4**	**$38,008.0**	**$41,099.0**	**$39,483.0**	**($1,616.0)**
Building and Facilities					
Homeland Security					
Homeland Security: Protection of EPA Personnel and Infrastructure	$10,372.2	$7,870.0	$7,747.0	$8,070.0	$323.0
Operations and Administration					
Facilities Infrastructure and Operations	$28,672.1	$26,931.0	$26,511.0	$26,931.0	$420.0
Total, Building and Facilities	**$39,044.3**	**$34,801.0**	**$34,258.0**	**$35,001.0**	**$743.0**
Hazardous Substance Superfund					
Air Toxics and Quality					
Radiation: Protection	$1,960.9	$2,373.0	$2,342.0	$2,414.0	$72.0
Audits, Evaluations, and Investigations					
Audits, Evaluations, and Investigations	$12,286.2	$7,149.0	$11,486.0	$7,164.0	($4,322.0)
Compliance					
Compliance Assistance and Centers	$11.1	$22.0	$22.0	$22.0	$0.0
Compliance Incentives	$139.4	$144.0	$159.0	$146.0	($13.0)
Compliance Monitoring	$1,487.0	$1,182.0	$1,165.0	$1,192.0	$27.0
Subtotal, Compliance	**$1,637.5**	**$1,348.0**	**$1,346.0**	**$1,360.0**	**$14.0**
Enforcement					
Environmental Justice	$911.1	$757.0	$745.0	$757.0	$12.0
Superfund: Enforcement	$164,108.2	$161,610.0	$164,845.0	$163,678.0	($1,167.0)
Superfund: Federal Facilities Enforcement	$8,846.2	$9,843.0	$9,726.0	$10,225.0	$499.0
Civil Enforcement	$739.2	$884.0	$870.0	$0.0	($870.0)
Criminal Enforcement	$7,895.7	$9,167.0	$9,053.0	$7,830.0	($1,223.0)
Enforcement Training	$630.7	$840.0	$827.0	$858.0	$31.0
Forensics Support	$2,805.2	$2,310.0	$3,750.0	$2,441.0	($1,309.0)
Subtotal, Enforcement	**$185,936.3**	**$185,411.0**	**$189,816.0**	**$185,789.0**	**($4,027.0)**

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Homeland Security					
Homeland Security: Communication and Information	$300.0	$0.0	$0.0	$0.0	$0.0
Homeland Security: Critical Infrastructure Protection					
Decontamination	$61.8	$198.0	$195.0	$198.0	$3.0
Homeland Security: Critical Infrastructure Protection (other activities)	$1,575.4	$1,659.0	$1,633.0	$1,481.0	($152.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	$1,637.2	$1,857.0	$1,828.0	$1,679.0	($149.0)
Homeland Security: Preparedness, Response, and Recovery					
Decontamination	$6,913.3	$10,527.0	$10,371.0	$10,620.0	$249.0
Laboratory Preparedness and Response	$8,519.1	$6,064.0	$5,971.0	$9,589.0	$3,618.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$34,885.7	$28,689.0	$28,287.0	$36,467.0	$8,180.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$50,318.1	$45,280.0	$44,629.0	$56,676.0	$12,047.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$636.7	$594.0	$585.0	$1,194.0	$609.0
Subtotal, Homeland Security	**$52,892.0**	**$47,731.0**	**$47,042.0**	**$59,549.0**	**$12,507.0**
Information Exchange / Outreach					
Congressional, Intergovernmental, External Relations	$137.5	$155.0	$154.0	$0.0	($154.0)
Exchange Network	$1,374.2	$1,433.0	$1,411.0	$1,433.0	$22.0
Subtotal, Information Exchange / Outreach	**$1,511.7**	**$1,588.0**	**$1,565.0**	**$1,433.0**	**($132.0)**
IT / Data Management / Security					
Information Security	$562.3	$792.0	$780.0	$801.0	$21.0
IT / Data Management	$15,975.5	$16,338.0	$16,083.0	$16,872.0	$789.0
Subtotal, IT / Data Management / Security	**$16,537.8**	**$17,130.0**	**$16,863.0**	**$17,673.0**	**$810.0**
Legal / Science / Regulatory / Economic Review					
Alternative Dispute Resolution	$1,020.6	$837.0	$825.0	$846.0	$21.0
Legal Advice: Environmental Program	$826.8	$606.0	$740.0	$631.0	($109.0)
Subtotal, Legal / Science / Regulatory / Economic Review	**$1,847.4**	**$1,443.0**	**$1,565.0**	**$1,477.0**	**($88.0)**
Operations and Administration					
Facilities Infrastructure and Operations					

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Rent	$46,016.9	$44,997.0	$44,295.0	$45,353.0	$1,058.0
Utilities	$1,619.3	$2,466.0	$2,428.0	$3,042.0	$614.0
Security	$4,308.9	$6,767.0	$6,661.0	$6,524.0	($137.0)
Facilities Infrastructure and Operations (other activities)	$18,319.9	$20,726.0	$20,403.0	$21,351.0	$948.0
Subtotal, Facilities Infrastructure and Operations	$70,265.0	$74,956.0	$73,787.0	$76,270.0	$2,483.0
Financial Assistance Grants / IAG Management	$2,671.4	$3,049.0	$3,001.0	$3,116.0	$115.0
Acquisition Management	$19,129.3	$24,645.0	$24,327.0	$24,985.0	$658.0
Human Resources Management	$5,203.0	$5,036.0	$4,969.0	$5,063.0	$94.0
Central Planning, Budgeting, and Finance	$20,428.7	$24,306.0	$24,008.0	$26,102.0	$2,094.0
Subtotal, Operations and Administration	**$117,697.4**	**$131,992.0**	**$130,092.0**	**$135,536.0**	**$5,444.0**
Research: Human Health and Ecosystems					
Human Health Risk Assessment	$3,926.4	$3,972.0	$3,910.0	$3,325.0	($585.0)
Research: Land Protection					
Research: Land Protection and Restoration	$23,859.1	$20,081.0	$19,768.0	$21,021.0	$1,253.0
Research: SITE Program	$255.1	$0.0	$0.0	$0.0	$0.0
Subtotal, Research: Land Protection	**$24,114.2**	**$20,081.0**	**$19,768.0**	**$21,021.0**	**$1,253.0**
Research: Sustainability					
Research: Sustainability	$212.3	$0.0	$0.0	$0.0	$0.0
Superfund Cleanup					
Superfund: Emergency Response and Removal	$222,093.7	$191,880.0	$190,011.0	$193,853.0	$3,842.0
Superfund: EPA Emergency Preparedness	$9,101.6	$9,318.0	$9,195.0	$9,504.0	$309.0
Superfund: Federal Facilities	$31,763.5	$31,879.0	$31,447.0	$31,440.0	($7.0)
Superfund: Remedial	$659,513.4	$584,836.0	$591,078.0	$586,120.0	($4,958.0)
Superfund: Support to Other Federal Agencies	$4,967.0	$6,575.0	$6,472.0	$6,575.0	$103.0
Brownfields Projects	$4,420.0	$0.0	$0.0	$0.0	$0.0
Subtotal, Superfund Cleanup	**$931,859.2**	**$824,488.0**	**$828,203.0**	**$827,492.0**	**($711.0)**
Total, Hazardous Substance Superfund	**$1,352,419.3**	**$1,244,706.0**	**$1,253,998.0**	**$1,264,233.0**	**$10,235.0**
(Transfer to Office of Inspector General)	**($12,286.2)**	**($7,149.0)**	**($11,486.0)**	**($7,164.0)**	**$4,322.0**
(Transfer to Science and Technology)	**($29,312.3)**	**($26,126.0)**	**($25,718.0)**	**($26,417.0)**	**($699.0)**
Leaking Underground Storage Tanks					
Compliance					
Compliance Assistance and Centers	$644.1	$688.0	$709.0	$753.0	$44.0

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
IT / Data Management / Security					
IT / Data Management	$136.5	$177.0	$174.0	$162.0	($12.0)
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$717.1	$696.0	$685.0	$696.0	$11.0
Facilities Infrastructure and Operations (other activities)	$131.4	$205.0	$202.0	$206.0	$4.0
Subtotal, Facilities Infrastructure and Operations	$848.5	$901.0	$887.0	$902.0	$15.0
Acquisition Management	$223.1	$165.0	$162.0	$165.0	$3.0
Central Planning, Budgeting, and Finance	$812.6	$1,102.0	$1,085.0	$1,131.0	$46.0
Human Resources Management	$3.0	$3.0	$3.0	$3.0	$0.0
Subtotal, Operations and Administration	**$1,887.2**	**$2,171.0**	**$2,137.0**	**$2,201.0**	**$64.0**
Research: Land Protection					
Research: Land Protection and Restoration	$657.0	$660.0	$650.0	$413.0	($237.0)
Underground Storage Tanks (LUST / UST)					
LUST / UST					
EPAct & Related Authorities Implemention	$0.0	$0.0	$1,575.0	$0.0	($1,575.0)
LUST / UST (other activities)	$14,996.1	$10,558.0	$10,393.0	$10,548.0	$155.0
Subtotal, LUST / UST	$14,996.1	$10,558.0	$11,968.0	$10,548.0	($1,420.0)
LUST Cooperative Agreements					
EPAct & Related Authorities Implemention	$0.0	$0.0	$28,941.0	$0.0	($28,941.0)
LUST Cooperative Agreements (other activities)	$65,353.0	$58,207.0	$61,237.0	$58,207.0	($3,030.0)
Subtotal, LUST Cooperative Agreements	$65,353.0	$58,207.0	$90,178.0	$58,207.0	($31,971.0)
Subtotal, Underground Storage Tanks (LUST / UST)	**$80,349.1**	**$68,765.0**	**$102,146.0**	**$68,755.0**	**($33,391.0)**
Total, Leaking Underground Storage Tanks	**$83,673.9**	**$72,461.0**	**$105,816.0**	**$72,284.0**	**($33,532.0)**
Oil Spill Response					
Compliance					
Compliance Assistance and Centers	$267.9	$291.0	$286.0	$303.0	$17.0
Enforcement					
Civil Enforcement	$1,661.5	$2,065.0	$2,072.0	$2,233.0	$161.0
IT / Data Management / Security					

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
IT / Data Management	$23.8	$34.0	$33.0	$24.0	($9.0)
Oil					
Oil Spill: Prevention, Preparedness and Response	$12,890.3	$13,499.0	$13,290.0	$13,927.0	$637.0
Operations and Administration					
Facilities Infrastructure and Operations					
Rent	$447.0	$438.0	$431.0	$438.0	$7.0
Facilities Infrastructure and Operations (other activities)	$53.4	$52.0	$57.0	$58.0	$1.0
Subtotal, Facilities Infrastructure and Operations	$500.4	$490.0	$488.0	$496.0	$8.0
Subtotal, Operations and Administration	**$500.4**	**$490.0**	**$488.0**	**$496.0**	**$8.0**
Research: Land Protection					
Research: Land Protection and Restoration	$841.3	$901.0	$887.0	$704.0	($183.0)
Total, Oil Spill Response	**$16,185.2**	**$17,280.0**	**$17,056.0**	**$17,687.0**	**$631.0**
State and Tribal Assistance Grants					
State and Tribal Assistance Grants (STAG)					
Infrastructure Assistance: Clean Water SRF	$1,039,998.4	$687,554.0	$689,080.0	$555,000.0	($134,080.0)
Infrastructure Assistance: Drinking Water SRF	$800,695.0	$842,167.0	$829,029.0	$842,167.0	$13,138.0
Congressionally Mandated Projects	$150,200.2	$0.0	$143,723.0	$0.0	($143,723.0)
Infrastructure Assistance: Alaska Native Villages	$34,907.5	$15,500.0	$24,610.0	$15,500.0	($9,110.0)
Brownfields Projects	$85,865.8	$89,258.0	$93,518.0	$93,558.0	$40.0
Clean School Bus Initiative	$4,523.6	$0.0	$0.0	$0.0	$0.0
Diesel Emissions Reduction Grant Program					
EPAct & Related Authorities Implemention	$0.0	$35,000.0	$49,220.0	$49,220.0	$0.0
CA Emission Reduction Project Grants	$0.0	$0.0	$9,844.0	$0.0	($9,844.0)
Subtotal, Diesel Emissions Reduction Grant Program	$0.0	$35,000.0	$59,064.0	$49,220.0	($9,844.0)
Infrastructure Assistance: Mexico Border	$96,452.7	$10,000.0	$19,688.0	$10,000.0	($9,688.0)
Subtotal, State and Tribal Assistance Grants (STAG)	**$2,212,643.2**	**$1,679,479.0**	**$1,858,712.0**	**$1,565,445.0**	**($293,267.0)**
Categorical Grants					
Categorical Grant: Beaches Protection	$10,573.4	$9,900.0	$9,746.0	$9,900.0	$154.0
Categorical Grant: Brownfields	$50,556.9	$49,495.0	$48,723.0	$49,495.0	$772.0
Categorical Grant: Environmental Information	$15,830.8	$12,850.0	$9,844.0	$11,000.0	$1,156.0
Categorical Grant: Hazardous Waste Financial Assistance	$104,650.9	$103,346.0	$101,734.0	$103,346.0	$1,612.0
Categorical Grant: Homeland Security	$3,730.2	$4,950.0	$4,873.0	$4,950.0	$77.0

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: Lead	$22,935.5	$13,564.0	$13,352.0	$13,564.0	$212.0
Categorical Grant: Nonpoint Source (Sec. 319)	$209,889.6	$194,040.0	$200,857.0	$184,540.0	($16,317.0)
Categorical Grant: Pesticides Enforcement	$19,063.6	$18,711.0	$18,419.0	$18,711.0	$292.0
Categorical Grant: Pesticides Program Implementation	$13,319.3	$12,970.0	$12,768.0	$12,970.0	$202.0
Categorical Grant: Pollution Control (Sec. 106)					
Monitoring Grants	$13,246.5	$18,500.0	$18,211.0	$18,500.0	$289.0
Categorical Grant: Pollution Control (Sec. 106) (other activities)	$197,964.3	$203,164.0	$199,995.0	$203,164.0	$3,169.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	$211,210.8	$221,664.0	$218,206.0	$221,664.0	$3,458.0
Categorical Grant: Pollution Prevention	$6,121.9	$5,940.0	$4,863.0	$4,940.0	$77.0
Categorical Grant: Public Water System Supervision (PWSS)	$97,461.9	$99,100.0	$97,554.0	$99,100.0	$1,546.0
Categorical Grant: Radon	$7,915.0	$8,074.0	$7,948.0	$8,074.0	$126.0
Categorical Grant: Sector Program	$1,360.9	$2,228.0	$1,209.0	$1,828.0	$619.0
Categorical Grant: State and Local Air Quality Management	$208,567.3	$185,180.0	$216,825.0	$185,580.0	($31,245.0)
Categorical Grant: Targeted Watersheds	$4,582.0	$0.0	$9,844.0	$0.0	($9,844.0)
Categorical Grant: Toxics Substances Compliance	$5,710.3	$5,099.0	$5,019.0	$5,099.0	$80.0
Categorical Grant: Tribal Air Quality Management	$11,840.5	$10,940.0	$10,769.0	$13,300.0	$2,531.0
Categorical Grant: Tribal General Assistance Program	$61,569.8	$56,925.0	$56,037.0	$57,925.0	$1,888.0
Categorical Grant: Underground Injection Control (UIC)	$10,150.8	$10,891.0	$10,721.0	$10,891.0	$170.0
Categorical Grant: Underground Storage Tanks	$29,459.4	$22,274.0	$2,461.0	$22,800.0	$20,339.0
Categorical Grant: Wastewater Operator Training	$828.1	$0.0	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	$1,258.1	$0.0	$0.0	$0.0	$0.0
Categorical Grant: Wetlands Program Development	$16,313.7	$16,830.0	$16,567.0	$16,830.0	$263.0
Subtotal, Categorical Grants	**$1,124,900.7**	**$1,064,971.0**	**$1,078,339.0**	**$1,056,507.0**	**($21,832.0)**
Total, State and Tribal Assistance Grants	**$3,337,543.9**	**$2,744,450.0**	**$2,937,051.0**	**$2,621,952.0**	**($315,099.0)**
Total, Rescission of Prior Year Funds	**$0.0**	**($5,000.0)**	**($5,000.0)**	**($10,000.0)**	**($5,000.0)**
TOTAL, EPA	**$7,911,371.9**	**$7,199,400.0**	**$7,472,324.0**	**$7,142,520.0**	**($329,804.0)**

DISCONTINUED PROGRAMS

Categorical Grant: Targeted Watersheds
Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Ecosystems

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$4,582.0***	***$0.0***	***$9,844.0***	***$0.0***	***($9,844.0)***
Total Budget Authority / Obligations	$4,582.0	$0.0	$9,844.0	$0.0	($9,844.0)
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

The Targeted Watersheds Grant Program encourages successful community-based approaches and management techniques to protect and restore the nation's waters.

The Targeted Watersheds Grant Program enhances community watershed groups' efforts through two different types of competitive grants. Implementation grants provide monetary assistance directly to watershed organizations to implement restoration/protection activities within their watershed. Resources are used to stabilize stream banks, demonstrate nutrient management schemes, establish pollutant credits and trading projects, and work with local governments and private citizens to promote sustainable practices and strategies. Capacity building grants support established watershed service providers in their effort to increase the viability, sustainability and effectiveness of local watershed groups by providing tools, training, and education.

FY 2009 Activities and Performance Plan:

There is no request for this program in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- (-$9,844.0) This reduction reflects elimination of congressionally directed funding provided in the FY 2008 Omnibus.

Statutory Authority:

Department of the Interior, Environment, and Related Agencies Appropriations Act, 2006, Public Law 109-54.

Categorical Grant: Wastewater Operator Training

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$828.1***	***$0.0***	***$0.0***	***$0.0***	***$0.0***
Total Budget Authority / Obligations	$828.1	$0.0	$0.0	$0.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Section 104(g)(1) of the Clean Water Act authorizes funding for the Wastewater Treatment Plant Operator On-site Assistance Training program. This program targets small publicly-owned wastewater treatment plants, with a discharge of less than 5,000,000 gallons per day. Federal funding for this program is administered through grants to states, often in cooperation with educational institutions or non-profit agencies. In most cases, assistance is administered through an environmental training center.

The goal of the program is to provide direct on-site assistance to operators at these small wastewater treatment facilities. The assistance focuses on issues such as wastewater treatment plant capacity, operation training, maintenance, administrative management, financial management, trouble-shooting, and laboratory operations.

FY 2009 Activities and Performance Highlights:

There is no request for this program in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

Categorical Grant: Water Quality Cooperative Agreements

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2007 Actuals	FY 2008 Pres Bud	FY 2008 Enacted	FY 2009 Pres Bud	FY 2009 Pres Bud v. FY 2008 Enacted
State and Tribal Assistance Grants	***$1,258.1***	***$0.0***	***$0.0***	***$0.0***	***$0.0***
Total Budget Authority / Obligations	$1,258.1	$0.0	$0.0	$0.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0	0.0

Program Project Description:

Under authority of Section 104(b)(3) of the Clean Water Act, EPA makes grants to a wide variety of recipients, including states, Tribes, state water pollution control agencies, interstate agencies, and other nonprofit institutions, organizations, and individuals to promote the coordination of environmentally beneficial activities. This competitive funding vehicle is used by EPA's partners to further the Agency's goals of providing clean and safe water. The program is designed to fund a broad range of projects, including: innovative water efficiency programs, research, training and education, demonstration, best management practices, stormwater management planning, and innovative permitting programs and studies related to the causes, effects, extent, and prevention of pollution.

FY 2009 Activities and Performance Highlights:

There is no request for this program in FY 2009.

FY 2009 Change from FY 2008 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

EXPECTED BENEFITS OF THE PRESIDENT'S E-GOVERNMENT INITIATIVES

Grants.gov

The Grants.gov Initiative benefits EPA and its grant programs by providing a single location to publish grant opportunities and application packages, and by providing a single site for the grants community to apply for grants using common forms, processes and systems. EPA believes that the central site raises the visibility of our grants opportunities to a wider diversity of applicants. Grants.gov has also allowed EPA to discontinue support for its own electronic grant application system, saving operational, training, and account management costs.

The grants community benefits from savings in postal costs, paper and envelopes. Applicants save time in searching for Agency grant opportunities and in learning the application systems of various agencies. At the request of the state environmental agencies, EPA has begun to offer Grants.gov application packages for mandatory grants (i.e. Continuing Environmental Program Grants). States requested that we extend usage to mandatory programs to streamline their application process.

During FY07 EPA posted 173 grant opportunities on Grants.gov Find and linked 100% of those competitive opportunities to electronic application packages on Apply. EPA received 2,942 applications through Grants.gov in 2007, a 28% increase over the number of applications received in 2007.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-04-00-04-1316-24-402-16	$536.2
2009	020-00-04-00-04-1316-24	$517.7

Integrated Acquisition Environment (IAE)

The Integrated Acquisition Environment (IAE) is comprised of nine government-wide automated applications and/or databases that have contributed to streamlining the acquisition business process across the government. EPA leverages the usefulness of some of these systems via electronic linkages between EPA's acquisition systems and the IAE shared systems. Other IAE systems are not linked directly to EPA's acquisition systems, but benefit the Agency's contracting staff and vendor community as stand-alone resources.

EPA's acquisition systems use data provided by the Central Contractor Registry (CCR) to replace internally maintained vendor data. Contracting officers can download vendor-provided representation and certification information electronically, via the Online Representations and Certifications (ORCA) database, which allows vendors to submit this information once, rather than separately for every contract proposal. Contracting officers are able to access the Excluded Parties List System (EPLS) via links in EPA's acquisition systems to identify vendors that are debarred from receiving contract awards.

Contracting officers can also link to the Wage Determination Online (WDOL) to obtain information required under the Service Contract Act and the Davis-Bacon Act. EPA's acquisition systems link to the Federal Procurement Data System – Next Generation (FPDS-NG) for submission of contract actions at the time of award. FPDS-NG provides public access to government-wide contract information. The Electronic Subcontracting Reporting System (eSRS) supports vendor submission of subcontracting data for contracts identified as requiring this information. EPA submits synopses of procurement opportunities over $25,000 to the Federal Business Opportunities (FBO) website, where the information is accessible to the public. Vendors use this website to identify business opportunities in federal contracting.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-04-0230-24	$127.278
2009	020-00-01-16-04-0230-24	$151.282

Integrated Acquisition Environment (IAE) Grants and Loans

The Federal Funding Accountability and Transparency Act (FFATA) requires the agencies to unambiguously identify contract, grant, and loan recipients and determine parent/child relationship, address information, etc. The FFATA taskforce determined that using both the Dun and Bradstreet (D&B) DUNS Number (standard identifier for all business lines) and Central Contractor Registration (CCR), the single point of entry for data collection and dissemination, is the most appropriate way to accomplish this. This fee will pay for EPA's use of this service in the course of reporting grants and/or loans.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-02-0231-24	$89.9
2009	020-00-01-16-02-0231-24	$89.9

Note: FY 2008 amount is for Agency contribution and FY 2009 amount is for service fee.

Enterprise Human Resource Integration Initiative

The Enterprise Human Resource Integration's (EHRI) Electronic Official Personnel Folder (eOPF) is designed to provide a consolidated repository that digitally documents the employment actions and history of individuals employed by the Federal government. EPA plans to migrate from a manual Official Personnel File (OPF) process to the federal eOPF system by April 2008. This initiative will benefit the Agency by reducing contract support costs for file room maintenance and improve customer service for employees and productivity for HR specialists.

The Agency plans to reduce the Headquarters OPF contract once the eOPF is implemented. The contract will be evaluated one year from the actual eOPF deployment to determine if additional cost reductions are feasible or if the contract could be eliminated. In addition, customer service will improve for employees since they will have 24/7 access to view and print their official

personnel documents and HR specialists will no longer be required to manually file, retrieve or mail personnel actions to employees thus improving productivity.

EPA benefits from EHRI in FY09 are anticipated to be the same as those described for FY08.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-01-1219-21	$406.0
2009	020-00-01-16-01-1219-21	$474.2

Recruitment One-Stop (ROS)

Recruitment One-Stop (ROS) simplifies the process of locating and applying for Federal jobs. USAJOBS is a standard job announcement and resume builder. It is the one-stop for Federal job seekers to search for and apply to positions on-line. This integrated process benefits citizens by providing a more efficient process to locate and apply for jobs, and assists Federal agencies in hiring top talent in a competitive marketplace. The Recruitment One-Stop initiative has increased job seeker satisfaction with the Federal job application process and is helping the Agency to locate highly-qualified candidates and improve response times to applicants.

By integrating with ROS, the Agency has eliminated the need for applicants to maintain multiple user IDs to apply for Federal jobs through various systems. The vacancy announcement format has been improved for easier readability. The system can maintain up to 5 resumes per applicant, which allows them to create and store resumes tailored to specific skills -- this is an improvement from our previous system that only allowed one resume per applicant. In addition, ROS has a notification feature that keeps applicants updated on the current status of the application, and provides a link to the agency website for detailed information. This self-help ROS feature allows applicants to obtain up-to-date information on the status of their application upon request.

EPA benefits from Recruitment One-Stop in FY09 are anticipated to be the same as those described for FY08.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-04-0010-24	$102.2
2009	020-00-01-16-04-0010-24	$106.3

eTraining

The President's Management Agenda encourages e-learning to improve training, efficiency and financial performance. EPA recently exercised its option to renew the current Interagency Agreement with OPM-GoLearn that provides licenses to online training for employees. EPA purchased 5,000 licenses to prevent any interruption in service to current users.

EPA benefits from eTraining in FY09 are anticipated to be the same as those described for FY08.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-04-1200-24-403-250	$80.0
2009	020-00-01-16-1217-24	$80.0

Human Resources LoB

The Human Resources Line of Business (HR LoB) provides federal government the infrastructure to support pay-for-performance systems, modernized HR systems, and the core functionality necessary for the strategic management of human capital.

The HR LoB offers common solutions that will enable Federal departments and agencies to work more effectively, and it provides managers and executives across the Federal Government improved means to meet strategic objectives. EPA benefits by supporting an effective program management activity which will deliver more tangible results in 2009 and beyond.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-01-16-04-1200-24-403-250	$65.217
2009	020-00-01-16-04-1200-24	$65.217

Grants Management LoB

EPA manages 6,288 grant awards equaling approximately $4.1 billion. EPA anticipates the key benefit will be having a centralized location to download all applications, make awards, and track awards to closeout. Automated business processes available through consortium service providers will decrease agency reliance on manual and paper-based processing. Consortium lead agencies will spread operations and maintenance (O&M) costs, and development, modernization, and enhancement (DME) costs across agencies, decreasing the burden that any one agency must bear.

GM LoB will lead to a reduction in the number of systems of record for grants data across EPA and the government and the development of common reporting standards, improving EPA's ability to provide agency- and government-wide reports on grant activities and results. Migrating to a consortium lead agency will help EPA comply with the Federal Financial Assistance Management Improvement Act of 1999 and the Federal Funding Accountability and Transparency Act of 2006.

Service to constituents will be improved through the standardization and streamlining of government-wide grants business processes. The public will save time a result of quicker notification and faster payments due to an automated system for grants processing. Furthermore, GM LoB will minimize complex and varying agency-specific requirements and increase grantee

ease of use on Federal grants management systems. Constituents will benefit as they will have fewer unique agency systems and processes to learn; grantees' ability to learn how to use the system will be improved and reliance on call center technical support will be reduced. Consortium lead agencies will also provide grantees with online access to standard post-award reports, decreasing the number of unique agency-specific reporting requirements.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-04-00-04-1300-24-108-025	$59.3
2009	020-00-04-00-04-1300-24	$59.3

Geospatial LoB

The Geospatial Line of Business (GeoLoB) will reduce EPA costs and improve our operations in several areas. The investment in FY08 and FY09 will provide the necessary planning and coordination to begin providing significant benefits to EPA in FY10 and beyond in the following ways:

EPA's mission requires the use of a broad range of data on places (e.g. facilities, roads, waste sites, etc.) and geographic features (wetlands, sols, hydrography, etc) to support our decision making processes. OMB circular A-16 identified over 30 critical datasets, many of which are needed to support environmental decisions. The GeoLoB Program Management Office, established in late FY07, will help EPA by providing much needed planning and coordination across the A-16 data stewards to complete these critical data sets.

EPA is moving towards deployment of a service-oriented architecture that will facilitate flexible access to data to support a variety of business applications. Implementing a Service Oriented Architecture (SOA) requires the establishment of common standards and policies. The GeoLoB will advance the establishment of a geospatial segment architecture as part of the Federal Enterprise Architecture that can expose geospatial data and capabilities across vertical lines of business. In the process of establishing the geospatial segment architecture, the GeoLoB will promote the implementation of standards and policies to support an SOA.

EPA's geospatial program has saved approximately $2 million per year by consolidating procurements for data and tools into multi-year enterprise licenses. The GeoLoB will reduce costs by providing an opportunity for EPA and other agencies to share approaches on procurement consolidation that other agencies can follow. In FY08, EPA is leading a GeoLoB initiative to explore opportunities for Federal-wide acquisition of key geospatial software and data.

EPA benefits from Geospatial LoB in FY09 are anticipated to be the same as those described for FY08.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-01-16-04-3100-24	$43.2
2009	020-00-01-16-04-3100-24	$42.0

eRulemaking

The eRulemaking program is designed to enhance public access and participation in the regulatory process through electronic systems; reduce burden for citizens and businesses in finding relevant regulations and commenting on proposed rulemaking actions; consolidate redundant docket systems; and improve agency regulatory processes and the timeliness of regulatory decisions.

The Federal Docket Management System, which was launched under eRulemaking, has simplified the public's participation in the rulemaking process and made EPA's rulemaking business processes more accessible as well as transparent. FDMS provides EPA's 1,430 registered users with a secure, centralized electronic repository for managing the Agency's rulemaking development via distributed management of data and robust role-based user access. EPA posts regulatory and non-regulatory documents in *Regulations.gov* for public viewing, downloading, and commenting. From January through October 2007, *Regulations.gov* posted 1,374 Federal Register notices, 1,171 rules and proposed rules, and 24,461 public submissions. During the same time-frame, EPA posted 13,429 supporting and related materials.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-04-0060-24-306-113	$535.0
2009	020-00-01016-04-0060-24	$1,531.1

E-Authentication

Public trust in the security of information exchanged over the Internet plays a vital role in the success of E-Gov initiatives. E-Authentication is setting the standards for the identity proofing of individuals and businesses, based on risk of online services used. The initiative focuses on meeting the authentication business needs of the E-Gov initiatives and building the necessary infrastructure to support common, unified processes and systems for government-wide use. This will help build the trust that must be an inherent part of every online exchange between citizens and government.

The only web-based E-Authentication that EPA is currently implementing is for Central Data Exchange Web Portal (CDX-Web) at Level 3. CDX-Web provides E-Authentication and other services for back-end EPA systems, and our current plan is to offer production Level 3 E-Authentication for the end-users of the one system that currently is on track to implement PKI-

based digital signatures. This implementation will achieve production Level 3 E-Authentication by upgrading PKI certificate management practices and validation technologies already available within the CDX-Web environment so that they meet the requirements for E-Authentication participation. As currently planned, the implementation will provide E-Authentication services for 1,000 to 2,000 end-users.

The initiative benefits EPA by providing expertise, guidance, and documentation, including project planning and reporting templates, to enable EPA to achieve production implementation of E-Authentication for its CDX-Web by the end of Q2 FY08. EPA is taking advantage of the availability of PKI certificates provided through the EPA Authentication Federation to offer production level 3 E-Authentication service.

EPA benefits from E-Authentication in FY09 are anticipated to be similar to those described for FY08.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-16-03-0250-24	$104.1
2009	020-00-01-16-03-0250-24	$201.9

Business Gateway

By creating a single portal for business information, such as the e-Forms catalog, Business Gateway directly benefits EPA's regulated communities, many of whom are subject to complex regulatory requirements across multiple agencies. The Business Gateway initiative benefits EPA by supporting the Agency's emphasis on the Small Business Paperwork Relief Act of 2002. EPA has over 100 initiatives, activities, and services directed at small business needs. Business.gov continues to provide a one-stop compliance tool enabling small and emerging businesses access to compliance information, forms and tools across the Federal Government. Business Gateway supports EPA's small business activities function by providing the following benefits:

- Providing a single point of access for electronic regulatory forms;
- Providing "plain English" compliance guidance, fact sheets and links to checklists for small businesses; and
- Maintaining an extensive Web site with numerous links to other internal and external assistance sources.

EPA anticipates similar benefits from Business Gateway in 2009 as stated for 2008.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-01-16-04-0100-24	$120.0
2009	020-00-01-16-04-0100-24	$209.3

E-Travel

E-Travel is designed to provide EPA more efficient and effective travel management services, with cost savings from cross-government purchasing agreements and improved functionality through streamlined travel policies and processes, strict security and privacy controls, and enhanced agency oversight and audit capabilities. EPA employees also will benefit from the integrated travel planning provided through E-Travel. EPA and GSA have agreed to a September 2008 GovTrip implementation date.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2008	020-00-01-01-03-0221-24	$1,088.7
2009	020-00-01-01-03-0221-24	$1,327.9

IT LoB

The initiative benefits EPA through improved IT performance, greater efficiencies in IT infrastructure investments, and consistency and standardization of infrastructure platforms. The IT LoB will provide EPA with best practice data and industry-wide performance metrics to validate existing performance.

EPA stands to benefit from all three IT Infrastructure areas of concentration (End User Systems and Support, Mainframes and Servers Systems and Support, and Telecommunications Systems and Support). In addition, EPA should benefit from information and, potentially, pricing previously available to only larger agencies.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-02-00-04-3300-24	$20.0
2009	020-00-02-00-04-3300-24	$0.0

Financial Management Line of Business

EPA will complete the planning and acquisition phase of its Financial System Modernization Project (FSMP) and will begin migration to a shared service provider. This work will benefit from the migration guidance developed in FY06, including the use of performance metrics developed for service level agreements and the use of standard business processes developed for four core financial management sub-functions: Payments, Receipts, Funds and Reporting. The Agency expects to achieve operational savings in future years because of the use of the shared service provider for operations and maintenance of the new system.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	020-00-01-01-04-1100-24	$45.0
2009	020-00-01-01-04-1100-24	$44.4

Budget Formulation and Execution (BFE) LoB

The Budget Formulation and Execution Lines of Business (BFE LoB) allows EPA and other agencies to access budget-related benefits and services and optionally implement LoB sponsored tools and services.

EPA has benefited from the BFE LoB in the following ways:

- Through on-going agency presentations, the LoB shares valuable information on what has/hasn't worked (best/worst practices) on the use of different budget systems and software.
- Through the use of a collaboration effort, a government-wide/government only capability for electronic collaboration *(Wiki)* has been established where a Budget Community website allows EPA to share budget information with OMB (and other federal agencies) in a more efficient and effective manner.
- The LoB is working on giving EPA and other agencies the capability to have secure, virtual on-line meetings where participants can not only hear what's been said by conference calling into the meeting, but also view budget-related presentations directly from their workspace.
- The LoB has provided EPA and other agencies with Budget Execution and Financial Management Integration tools, such as fundamental budget documents, that provide agencies a better understanding of the relationship and tie-in between the budget process and the financial management process.
- The LoB has provided budget-related training to EPA budget employees on OMB's MAX budget system, and on Treasury's FACTS II statements and how it ties to the budget process.
- EPA will also benefit from the LoB's on-going effort to develop a government-wide "core competencies" budget training and certification program where employees entering the field of budget will be required to complete essential basic federal budgeting training; thus providing EPA with a better qualified budget analysts.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2008	-------	$110.0 of in-kind services
2009	-------	$95.0 of in-kind services

VERIFICATION AND VALIDATION

GOAL 1 OBJECTIVE 1

FY 2009 Performance Measures:

- **Tons of SO_2 emissions from electric power generation sources (tons/yr from 1980 baseline) (PART measure)**
- **Percent change in average sulfur deposition and mean ambient sulfate concentrations reduced (% from baseline) (PART measure)**
- **Percent change in average nitrogen deposition and mean ambient nitrate concentrations reduced (% from baseline) (PART measure)**

Performance Databases:

Emissions Tracking System (ETS) - SO_2 and NO_X emissions

- Clean Air Status and Trends Network (CASTNET) - dry deposition
- National Atmospheric Deposition Program (NADP) - wet deposition
- Temporally Integrated Monitoring of Ecosystems program (TIME) - surface water chemistry

Long-Term Monitoring Network program (LTM) – surface water chemistry

Data Sources: On a quarterly basis, ETS receives and processes hourly measurements of SO_2, NO_X, volumetric flow, CO_2, and other emission-related parameters from more than 3,400 fossil fuel-fired utility units affected under the Title IV Acid Rain Program. These measurements are collected by certified continuous emission monitoring systems (CEMS) or equivalent continuous monitoring methods.

CASTNET measures particle and gas acidic deposition chemistry. Specifically, CASTNET measures sulfate and nitrate dry deposition and meteorological information at approximately 88 monitoring sites, primarily in the East. Two additional sites are planned as part of a multi-year network refurbishment and modernization project. These sites are scheduled to be in operation by 2007 and will help fill the coverage gap in the middle of country. CASTNET is a long-term dry deposition network funded, operated and maintained by EPA's Office of Air and Radiation (OAR). The National Park Service operates approximately 30 of the monitoring stations in cooperation with EPA.

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 precipitation components. Specifically, NADP provides measurements of sulfate and nitrate wet deposition at approximately 255 monitoring sites. EPA, along with several other Federal agencies, states, and private organizations, provide funding and support for NADP. The Illinois State Water Survey/University of Illinois maintains the NADP database.

The deposition monitoring networks have been in operation for over 25 years. They provide invaluable measurements on long-term trends and episodes in acid deposition; such data are essential for assessing progress toward the program's intended environmental outcomes. These

networks need to be modernized to ensure the continued availability of these direct environmental measures. Maintaining a robust long-term atmospheric deposition monitoring network is critical for the accountability of the Acid Rain and Clean Air Interstate Rule (CAIR) Programs (and/or Clear Skies if new legislation is enacted).

The TIME project measures surface water chemistry and is based on the concept of a probability sample, where each site is chosen to be statistically representative of a target population. In the Northeast (New England and the Adirondacks), this target population consists of lakes likely to be responsive to changes in rates of acidic deposition (i.e., those with Gran ANC < 100 μeq/L). In the Mid-Atlantic, the target population is upland streams with a high probability of responding to changes in acidic deposition (i.e., Northern Appalachian Plateau streams with Gran ANC < 100 μeq/L). Each lake or stream is sampled annually (in summer for lakes, in spring for streams), and results are extrapolated to the target population. The most recent (2003) TIME trends analysis reported data from 43 Adirondack lakes, 30 New England lakes, and 31 Appalachian Plateau streams.

The TIME project goals are to determine not only how a representative sample of water bodies is changing through time, but also whether the proportion of the population that is acidic has changed. The project is operated cooperatively with numerous collaborators in state agencies, academic institutions and other federal agencies.

The LTM project complements TIME's statistical approach to sampling lakes and streams. LTM samples a subset of sensitive lakes and streams with long-term data, most dating back to the early 1980s. These sites are sampled 3 to 15 times per year. This information is used to characterize how the most sensitive aquatic systems in each region are responding to changing deposition, as well as providing information on seasonal chemistry and episodic acidification. In most regions, a small number of higher ANC (e.g., GranANC >100 μeq/L) sites are also sampled, and help separate temporal changes due to acidic deposition from those attributable to other disturbances such as changes in land use. The most recent (2003) LTM trends analysis reported data from 48 Adirondack lakes, 24 New England lakes, 9 Northern Appalachian Plateau streams, and 69 streams in the Blue Ridge region of Virginia and West Virginia. The project is operated cooperatively with numerous collaborators in state agencies, academic institutions and other federal agencies.

Methods, Assumption, and Suitability: Promulgated methods are used to aggregate emissions data across all United States' utilities for each pollutant and related source operating parameters such as heat input.

QA/QC Procedures: Promulgated 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 a CEM fails the bias test, indicating a potential for systematic underestimation of emissions, the source of the error must be identified and corrected or the data are adjusted to minimize the bias. Each affected plant is required to maintain a

written QA plan documenting performance of these procedures and tests. Further information is available at: http://www.epa.gov/airmarkets/reporting/index.html.

CASTNET established a Quality Assurance Project Plan (QAPP) in November 2001. The QAPP contains data quality objectives and quality control procedures for accuracy and precision. {U.S. EPA, Office of Air Quality Planning and Standards, *Clean Air Status and Trends Network (CASTNet) Quality Assurance Project Plan* (Research Triangle Park, NC: U.S. EPA, November 2001)}. In addition, the program publishes annual quality assurance reports. Both the CASTNET QAPP and 2003 Annual Quality Assurance Report may be found at http://www.epa.gov/castnet/library.html.

NADP has established data quality objectives and quality control procedures for accuracy, precision and representation, available on the Internet: http://nadp.sws.uiuc.edu/QA/. The intended use of these data is to establish spatial and temporal trends in wet deposition and precipitation chemistry.

For TIME and LTM, the field protocols, laboratory methods, and quality assurance procedures are specific to each research group. QA/QC information is contained in the cited publications of each research group and compiled in Newell et al. (1987). The EMAP and TIME protocols and quality assurance methods are generally consistent with those of the LTM cooperators, and are detailed in Peck (1992) and in Table 3 of Stoddard, *et al* (2003).

Data Quality Review: The ETS provides instant feedback to sources on data reporting problems, format errors, and inconsistencies. The electronic data file QA checks are described at http://www.epa.gov/airmarkets/reporting/index.html (see *Electronic Data Report Review Process, ETS Tolerance Tables*, *Active ETS Error Codes/Messages* and *Range Format Errors*). All quarterly reports are analyzed to detect deficiencies and to identify reports that must be resubmitted to correct problems. EPA also identifies reports that were not submitted by the appropriate reporting deadline. Revised quarterly reports, with corrected deficiencies found during the data review process, must be obtained from sources by a specified deadline. All data are reviewed, and preliminary and final emissions data reports are prepared for public release and compliance determination.

CASTNET underwent formal peer review in 1997 by a panel of scientists from EPA and the National Oceanic Atmospheric Administration (NOAA). Findings are documented in *Examination of CASTNET: Data, Results, Costs, and Implications* (United States EPA, Office of Research and Development, National Exposure Research Laboratory, February 1997).

The NADP methods of determining wet deposition values have undergone extensive peer review; this process has been managed by NADP program office 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.

The TIME and LTM data used in EPA trends analysis reports are screened for internal consistency among variables, including ion balance and conductance balance. Samples with

unexplained variation in these variables are deleted. Sites with mean Gran ANC greater than 200 μeq/L also are deleted. EPA trends analyses exclude sites with chloride values that are outliers in their region, because high Cl- is typically associated with human development in the watershed. The Cl- and associated Na+ would alter normal soil ion exchange relationships, thus obscuring the response to acidic deposition.

Data Limitations: In order to improve the spatial resolution of CASTNET, additional monitoring sites are needed, particularly in the middle of the country.

Error Estimate: None

New/Improved Data or Systems: The program plans to modernize and enhance CASTNET to ensure network viability and enhance the monitoring capacity to support ongoing and future accountability needs, particularly relating to long range pollutant transport. The refurbishment of CASTNET will result in more comprehensive air quality data and information, made available faster by enabling real-time access to air quality information and promoting integration with other networks through regional/rural monitoring strategies. Refurbishment activities to be pursued in FY 2007 include: (1) completion of a pilot phase study to evaluate options for upgrading CASTNET with new advanced measurement instrumentation; (2) selection and procurement of advanced technology monitoring equipment for up to 10 sites; (3) establishment of 2 new sites in the middle of the country to improve geographic coverage and spatial resolution; and (4) implementation of new ecological indicators of air quality and atmospheric deposition to expand the suite of environmental metrics available for measuring the performance and efficiency of EPA's clean air programs.

References: For additional information about CASTNET, see http://www.epa.gov/castnet.html and for NADP, see http://nadp.sws.uiuc.edu/.

For a description of EPA's Acid Rain program, see
http://www.epa.gov/airmarkets/arp/index.html/ and in the electronic Code of Federal Regulations at http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C.html (40 CFR parts 72-78.)

For TIME and LTM data quality and QA/QC procedures, see
Newell, A. D., C. F. Powers, and S. J. Christie. 1987. Analysis of Data from Long-term monitoring of Lakes. U.S. Environmental Protection Agency, Corvallis, OR.

Peck, D. V. 1992. Environmental Monitoring and Assessment Program: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group. EPA/600/X-91/080, U.S. Environmental Protection Agency.

Stoddard, J. L., J. S. Kahl, F. A. Deviney, D. R. DeWalle, C. T. Driscoll, A. T. Herlihy, J. H. Kellogg, P. S. Murdoch, J. R. Webb, and K. E. Webster. 2003. Response of surface water chemistry to the Clean Air Act Amendments of 1990. EPA/620/R-03/001, U.S. Environmental Protection Agency, Corvallis, Oregon.

FY 2009 Performance Measures:

- **Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM 2.5) in all monitored counties from 2003 baseline (PART measure)**
- **Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline (PART measure)**

Performance Databases:

AQS —The Air Quality Subsystem (AQS) stores ambient air quality data used to evaluate an area's air quality levels relative to the NAAQS.

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 are clean air plans and define what actions a state will take to improve the air quality in areas that do not meet national ambient air quality standards

Data Sources:
AQS: State & local agency data from State and Local Air Monitoring Stations (SLAMS).

Population: Data from Census-Bureau/Department of Commerce

FREDS: Data are provided by EPA's Regional offices.

Methods, Assumptions, and Suitability: Design values are calculated for every county with adequate monitoring data (for more information on and a definition for design values, see www.epa.gov/ttn/oarpg/t1/memoranda/cdv.pdf). Air quality levels are evaluated relative to the baseline level and the design value. The change in air quality concentrations is then multiplied by the number of people living in the county. This analysis assumes that the populations of the areas are held constant at 2000 Census levels. Data comparisons over several years allow assessment of the air program's success.

QA/QC Procedures: AQS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, EPA's National Performance Audit Program (NPAP), system audits, and network reviews (Available on the Internet: www.epa.gov/ttn/amtic/npaplist.html). To ensure quality data, the SLAMS are required to meet the following: 1) each site must meet network design and site 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. Further information available on the Internet: http://www.epa.gov/cludygxb/programs/namslam.html and through United States EPA's Quality Assurance Handbook (EPA-454/R-98-004 Section 15)

Populations: No additional QA/QC beyond that done by the Census Bureau/Department of Commerce.

FREDS: No formal QA/QC procedures.

Data Quality Review:
AQS: No external audits have been done in the last 3 years. However, internal audits are regularly conducted.

Populations: No additional QA/QC beyond that done by the Census Bureau/Department of Commerce.

FREDS: None

Data Limitations:
AQS: None known

Populations: Not known

FREDS: None known

Error Estimate: At this time it is not possible to develop an error estimate. There is still too much uncertainty in the projections and near term variations in air quality (due to meteorological conditions, for example).

New/Improved Data or Systems:
AQS: In January 2002, EPA completed the reengineering of AQS to make it a more user friendly, Windows-based system. As a result, air quality data are more easily accessible via the Internet. AQS has also been enhanced to comply with the Agency's data standards (*e.g.*, latitude/longitude, chemical nomenclature). Beginning in July 2003, agencies submitted air quality data to AQS thru the Agency's Central Data Exchange (CDX). CDX is intended to be the portal through which all environmental data coming to or leaving the Agency will pass.

Population: None

FREDS: None

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Cumulative percent reduction in the number of days to process SIP revisions weighted by complexity [PART efficiency measure].**

Performance Databases: None

Data Sources: Data are provided by EPA's regional offices.

Methods, Assumptions, and Suitability: Baseline for processing SIP revisions is 420 days (The Clean Air Act (CAA) provides 60 days for completeness + 360 days for technical review)

Each Region will maintain a SIP tracking system. It will include the date of receipt, interim dates and the final Regional Administrator's signature for each SIP submission. At the end of the fiscal year, each Region will sum the total allowable SIP processing days and the total actual SIP processing days for SIP revisions processed to final action during the fiscal year. Each Region will then submit the totals to the National SIP processing work group chair who will then divide the total actual processing days by the total allowable processing days and calculate the percent difference from base year processing time.

The SIP revisions are weighted by complexity because it takes some areas longer than others to reach attainment.

QA/QC Procedures: EPA regional staff ensure the number of SIP revisions finalized is equal to or less than the total number of SIP revisions received.

Data Quality Review: Same as QA/QC procedures

Data Limitations: None known

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: None

References: None.

FY 2009 Performance Measures:

- **Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application. (PART measure)**
- **Percent of new Title V operating permits issued within 18 months of receiving a complete permit application. (PART measure)**

Performance Databases: TOPS (Title V Operating Permit System).

Data Sources: Permitting Agencies (State and Local) via EPA Regional Offices

Methods, Assumptions, and Suitability: The performance measure is calculated by comparing the number of new permits or significant permit modifications issued during past 18 months to the total number of new permits or significant permit modifications received during

the same period. Data are collected every 6 months. There are no underlying assumptions in the development of this measure.

QA/QC Procedures: Some data quality checks include: 1) making sure the number of permits issued in 18 months is equal to or less than the total number of permits received. 2) ensuring the percentages seem reasonable compared to previous reporting periods, and 3) making sure clock does not restart when additional information is submitted after the application is received.

Data Quality Review: Same as QA procedures

Data Limitations: None

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: TOPS has been revised and improved for 2006 to ensure better consistency between states and to specifically track PART measures.

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Percent of major NSR permits issued within one year of receiving a complete permit application. (PART measure)**

Performance Databases: RBLC (RACT (Reasonably Available Control Technology) BACT (Best Available Control Technology) LAER (Lowest Achievable Emissions Rate) Clearinghouse)

Data Sources: Permitting Agencies (State and Local)

Methods, Assumptions, and Suitability: The performance measure is calculated by determining the time period between the date of complete permit application and permit issuance. The percentage represents the number of major NSR permits issued within one year of complete application to the total number of permits issued within that same period. There are no underlying assumptions in the development of this performance measure.

QA/QC Procedures: Some data quality checks include: 1) making sure the permit issuance dates are after the complete permit application dates and appear reasonable, 2) ensuring the permit processing times are similar for comparable permits in previous reporting periods and 3) making sure the time period does not restart when additional information is submitted after the application is received.

Data Quality Review: Same as QA procedures

Data Limitations: None

Error Estimate: There is no estimate on the number of errors that could have been made during data entry.

New/Improved Data or Systems: N/A

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2009 Performance Measure:

- **Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value. (PART measure)**

Performance Databases:

AQS —The Air Quality Subsystem (AQS) stores ambient air quality data used to evaluate an area's air quality levels relative to the NAAQS.

AIRNow DMC –The AIRNow Data Management System (DMC) stores real-time ambient air quality data used for the sole purpose of reporting real-time AQI and air quality forecasting.

Data Sources:

AQS/DMC: State & local agency data from State and Local Air Monitoring Stations (SLAMS) and National Air Monitoring Stations (NAMS).

Methods, Assumptions, and Suitability:

Data are gathered from monitors using EPA-approved federal reference and/or equivalent methods, all of which are published via the Federal Register. EPA assumes the collecting agency has properly maintained each monitor and that the data sent to EPA have passed at least an automated QA/QC check. The monitoring networks have been providing data for decades and the data are considered highly reliable. In addition these data form the basis of EPA's attainment decisions, trend analysis, and health impact assessments.

QA/QC Procedures:

AQS: The QA/QC of the national air monitoring program has several major components: the Data Quality Objective (DQO) process, reference and equivalent methods program, EPA's National Performance Audit Program (NPAP), system audits, and network reviews (Available on the Internet:

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. Further information available on the Internet: http://www.epa.gov/cludygxb/programs/namslam.html and through United States EPA's Quality Assurance Handbook (EPA-454/R-98-004 Section 15)

DMC: The QA/QC procedures at each State, local, Tribal, or Federal agency are the same as documented above. Because the DMC handles real-time data, additional QA/QC data checks are built into the data flow process to further guard against erroneous values being passed through the system. Data in the DMC are not considered final and are not used for any regulatory purpose. Data in the AQS system are the official values used for regulatory analyses.

Data Quality Review:

AQS: No external audits have been done in the last 3 years. However, internal audits are regularly conducted.

DMC: No external audits have been done in the last 3 years. However, internal audits are regularly conducted and data are routinely processed by external users where applicable.

Data Limitations:

AQS: None known

DMC: None known

Error Estimate: At this time it is not possible to develop an error estimate. There is still too much uncertainty in the projections and near term variations in air quality (due to meteorological conditions for example).

New/Improved Data or Systems:

AQS: In January 2002, EPA completed the reengineering of AQS to make it a more user friendly, Windows-based system. As a result, air quality data are more easily accessible via the Internet. AQS has also been enhanced to comply with the Agency's data standards (*e.g.*, latitude/longitude, chemical nomenclature). Beginning in July 2003, agencies submitted air quality data to AQS thru the Agency's Central Data Exchange (CDX). CDX is intended to be the portal through which all environmental data coming to or leaving the Agency will pass.

DMC: AIRNow Data Management Center was redesigned in 2004 to more efficiently handle additional pollutants and provide for easier access to real-time data. In addition, automated QA/QC procedures were updated and increased flexibility for state/local agencies to update information was included.

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/. For more information on the monitoring network, as well as reference and equivalent methods, see the Ambient Monitoring Technology Information Center (AMTIC) at: http://www.epa.gov/ttn/amtic . For information on the AIRNow real-time program, see: http://www.airnow.gov/.

FY 2009 Performance Measures:

- Millions of tons of volatile organic compounds (VOCs) reduced since 2000 from mobile sources. (PART measure)
- Millions of tons of nitrogen oxide (NOx) reduced since 2000 from mobile sources. (PART measure)
- Tons of particular matter (PM 10) reduced since 2000 from mobile sources (PART measure)
- Tons of particular matter (PM 2.5) reduced since 2000 from mobile sources (PART measure)
- Limit the increase of CO Emissions (in tons) from mobile sources (PART measure)

Performance Database: National Emissions Inventory Database. See: http://www.epa.gov/ttn/chief/trends/

Data Source: Mobile source emissions inventories and Regulatory Impact Analyses

Estimates for on-road, off-road mobile source emissions are built from inventories fed into the relevant models, which in turn provide input to the National Emissions Inventory Database.

The MOBILE vehicle emission factor model is a software tool for predicting gram per mile emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, carbon dioxide, particulate matter, and toxics from cars, trucks, and motorcycles under various conditions. Inputs to the model include fleet composition, activity, temporal information, and control program characteristics.

The NONROAD emission inventory model is a software tool for predicting emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, particulate matter, and sulfur dioxides from small and large off road vehicles, equipment, and engines. Inputs to the model include fleet composition, activity and temporal information.

Certain mobile source information is updated annually. Inputs are updated annually only if there is a rationale and readily available source of annual data. Generally, Vehicle Miles Traveled (VMT), the mix of VMT by type of vehicle (Federal Highway Administration (FHWA)-types), temperature, gasoline properties, and the designs of Inspection/Maintenance (I/M) programs are updated each year. Emission factors for all mobile sources and activity estimates for non-road sources are changed only when the Office of Transportation and Air Quality requests that this be done and is able to provide the new information in a timely manner. The most recent models for

mobile sources are Mobile 6 and Nonroad 2002. (Available on the Internet at http://www.epa.gov/otaq/models.htm.)

EPA regulatory packages always include detailed Regulatory Impact Analysis which estimates the costs industry is projected to accrue in meeting EPA regulations. These cost estimates will form the basis of the numbers in the EPA performance measures. Also, costs for the EPA mobile source program (including personnel costs) will be included also. Estimates will be made for various years for tons/dollar for pollutants (the total of HC, CO, NOx, and PM) removed.

Methods, Assumptions, and Suitability: EPA issues emissions standards that set limits on how much pollution can be emitted from a given mobile source. Mobile sources include vehicles that operate on roads and highways ("on road" or "highway" vehicles), as well as nonroad vehicles, engines, and equipment. Examples of mobile sources are cars, trucks, buses, earthmoving equipment, lawn and garden power tools, ships, railroad locomotives, and airplanes. Vehicle and equipment manufacturers have responded to many mobile source emission standards by redesigning vehicles and engines to reduce pollution.

EPA uses models to estimate mobile source emissions, for both past and future years. The estimates are used in a variety of different settings. The estimates are used for rulemaking.

The most complete and systematic process for making and recording such mobile source emissions is the "Trends" inventory process executed each year by the Office of Air Quality Planning and Standards' (OAQPS) Emissions, Monitoring, and Analysis Division (EMAD). The Assessment and Standards Division, within the Office of Transportation and Air Quality, provides EMAD information and methods for making the mobile source estimates. In addition, EMAD's contractors obtain necessary information directly from other sources; for example, weather data and the Federal Highway Administration's (FHWA) Vehicle Miles Traveled (VMT) estimates by state. EMAD creates and publishes the emission inventory estimate for the most recent historical year, detailed down to the county level and with over 30 line items representing mobile sources. At irregular intervals as required for regulatory analysis projects, EMAD creates estimates of emissions for future years. When the method for estimating emissions changes significantly, EMAD 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. EMAD publishes the national emission estimates in hardcopy; county-level estimates are available electronically. Additional information about transportation and air quality related to estimating, testing for, and measuring emissions, as well as research being conducted on technologies for reducing emissions is available at http://www.epa.gov/otaq/research.htm

When major changes are made in the emission models or resulting inventories (and even the cost estimates), the performance measures will be reviewed to determine if they should be updated.

QA/QC Procedures: The emissions inventories are continuously improved.

Data Quality Review: The emissions inventories are reviewed by both internal and external parties, including the states, locals and industries.

Data Limitations: The limitations of the inventory estimates for mobile sources come from limitations in the modeled emission factors (based on emission factor testing and models predicting overall fleet emission factors in g/mile) and also in the estimated vehicle miles traveled for each vehicle class (derived from Department of Transportation data).http://www.epa.gov/otaq/m6.htm. 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. This nonroad emissions model accounts for over 200 types of nonroad equipment. Any limitations in the input data will carry over into limitations in the emission inventory estimates.

Error Estimate: Additional information about data integrity is available on the Internet: http://www.epa.gov/otaq/m6.htm.

New/Improved Data or Systems: To keep pace with new analysis needs, new modeling approaches, and new data, EPA is currently working on a new modeling system termed the Multi-scale Motor Vehicles and Equipment Emission System (MOVES). This new system will estimate emissions for on road and off road sources, cover a broad range of pollutants, and allow multiple scale analysis, from fine scale analysis to national inventory estimation. When fully implemented, MOVES will serve as the replacement for MOBILE6 and NONROAD. The new system will not necessarily be a single piece of software, but instead will encompass the necessary tools, algorithms, underlying data and guidance necessary for use in all official analyses associated with regulatory development, compliance with statutory requirements, and national/regional inventory projections. Additional information is available on the Internet: http://www.epa.gov/otaq/ngm.htm

References: For additional information about mobile source programs see: http://www.epa.gov/otaq/.

FY 2009 Performance Measures:

- **Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 2003 baseline (PART measure)**
- **Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 2003 baseline (PART measure)**

Performance Databases:

- National Emissions Inventory (NEI) for Hazardous Air Pollutants (HAPs)
- EPA's Health Criteria Data for Risk Characterization

Data Source:

To better measure the percentage change in cancer and noncancer risk to the public, a toxicity-weighted emission inventory performance measure has been developed. This measure utilizes data from the NEI for air toxics along with data from EPA's Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html), which is a compendium of cancer and noncancer health risk criteria used to develop a risk metric. This compendium includes tabulated values for long-term (chronic) inhalation for many of the 188 hazardous air pollutants. These health risk data were obtained from various data sources

including EPA, the U.S. Agency for Toxic Substances and Disease Registry, California Environmental Protection Agency, and the International Agency for Research on Cancer. The numbers from the health risk database are used for estimating the risk of contracting cancer and the level of hazard associated with adverse health effects other than cancer.

The NEI for HAPs includes emissions from large and small industrial sources inventoried as point sources, smaller stationary area and other sources, such as fires inventoried as non-point sources, and mobile sources. Prior to 1999 NEI for HAPs, there was the National Toxics Inventory (NTI). The baseline NTI (for base years 1990 - 1993) includes emissions information for 188 hazardous air pollutants from more than 900 stationary sources and from mobile 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 baseline NTI contains county level emissions data and cannot be used for modeling because it does not contain facility specific data.

The 1996 NTI and the 1999 NEI for HAPs contain stationary and mobile source estimates. These inventories also contain estimates of facility-specific HAP emissions and their source specific parameters such as location (latitude and longitude) and facility characteristics (stack height, exit velocity, temperature, etc.

The primary source of data in the 1996 and 1999 inventories are state and local air pollution control agencies and Tribes. These data vary in completeness, format, and quality. EPA evaluates these data and supplements them with data gathered while developing MACT and residual risk standards, industry data, and TRI data.

For more information and references on the development of the 1996 NTI, please go to the following web site: www.epa.gov/ttn/chief/nti/index.html#nti. For more information and references on the development of the 1999 NEI for HAPs, please go to the following web site: www.epa.gov/ttn/chief/net/index.html#1999.

Methods, Assumptions and Suitability: As the NEI is only developed every three years, EPA utilizes an emissions modeling system to project inventories for "off-years" and to project the inventory into the future. This model, the EMS-HAP (Emissions Modeling System for Hazardous Air Pollutants), can project future emissions, by adjusting stationary source emission data to account for growth and emission reductions resulting from emission reduction scenarios such as the implementation of the Maximum Achievable Control Technology (MACT) standards.

Once the EMS-HAP process has been performed, the EPA would tox-weight the inventory by "weighting" the emissions for each pollutant with the appropriate health risk criteria. This would be accomplished through a multi-step process. Initially, pollutant by pollutant values would be obtained from the NEI for the current year and the baseline year (1990/93). Conversion of actual tons for each pollutant for the current year and the baseline year to "toxicity-weighted" tons would be accomplished by multiplying the appropriate values from the health criteria database such as the unit risk estimate (URE) or lifetime cancer risk (defined at

www.epa.gov/ttn/atw/nata/gloss.htm#rfc) to get the noncancer tons. These toxicity-weighted values act as a surrogate for risk and allow EPA to compare the toxicity-weighted values against a 1990/1993 baseline of toxicity-weighted values to determine the percentage reduction in risk on an annual basis

Complete documentation on development of the NEI for HAPs can be found at http://www.epa.gov/ttn/chief/net/index.html. For more information and references on EMS-HAP, go to the following web sites: http://www.epa.gov/scram001/tt22.htm#aspen and http://www.epa.gov/ttn/chief/emch/projection/emshap.html. The growth and reduction information used for the projections are further described at http://www.epa.gov/ttn/chief/emch/projection/emshap.html.

QA/QC Procedures: The NTI and the NEI for HAPs are databases designed to house information from other primary sources. The EPA performs extensive quality assurance/quality control (QA/QC) activities, including checking data provided by other organizations, to improve the quality of the emission inventory. Some of these activities include: (1) the use of an automated format QC tool to identify potential errors of data integrity, code values, and range checks; (2) use of geographical information system (GIS) tools to verify facility locations; and (3) automated content analysis by pollutant, source category and facility to identify potential problems with emission estimates such as outliers, duplicate sites, duplicate emissions, coverage of a source category, etc. The content analysis includes a variety of comparative and statistical analyses. The comparative analyses help reviewers prioritize which source categories and pollutants to review in more detail based on comparisons using current inventory data and prior inventories. The statistical analyses help reviewers identify potential outliers by providing the minimum, maximum, average, standard deviation, and selected percentile values based on current data. The EPA has developed an automated QC content tool for data providers to use prior to submitting their data to EPA. After investigating errors identified using the automated QC format and GIS tools, the EPA follows specific guidance on augmenting data for missing data fields. This guidance is available at the following web site: http://www.epa.gov/ttn/chief/emch/invent/qaaugmementationmemo99nei_60603.pdf

The NTI database contains data fields that indicate if a field has been augmented and identifies the augmentation method. After performing the content analysis, the EPA contacts data providers to reconcile potential errors. The draft NTI is posted for external review and includes a README file, with instructions on review of data and submission of revisions, state-by-state modeling files with all modeled data fields, and summary files to assist in the review of the data. One of the summary files includes a comparison of point source data submitted by different organizations. During the external review of the data, state and local agencies, Tribes, and industry provide external QA of the inventory. The EPA evaluates proposed revisions from external reviewers and prepares memos for individual reviewers documenting incorporation of revisions and explanations if revisions were not incorporated. All revisions are tracked in the database with the source of original data and sources of subsequent revision.

The external QA and the internal QC of the inventory have resulted in significant changes in the initial emission estimates, as seen by comparison of the initial draft NEI for HAPs and its final version. For more information on QA/QC of the NEI for HAPs, please refer to the following

web site for a paper presented at the 2002 Emission Inventory Conference in Atlanta. "QA/QC - An Integral Step in the Development of the 1999 National Emission Inventory for HAPs", Anne Pope, et al. www.epa.gov/ttn/chief/conference/ei11/qa/pope.pdf

EPA's Office of Environmental Information (OEI) has created uniform data standards or elements, which provide "meta" information on the standard NEI Input Format (NIF) fields. These standards were developed by teams representing states, Tribes, EPA and other Federal agencies. The use of common data standards among partners fosters consistently defined and formatted data elements and sets of data values, and provides public access to more meaningful data. The standards relevant to the NEI for HAPs are the: SIC/NAICS, Latitude/Longitude, Chemical Identification, Facility Identification, Date, Tribal and Contact Data Standards. The 1999 NEI for HAPs is compliant with all new data standards except the Facility Identification Standard because OEI has not completed its assignment of Facility IDs to the 1999 NEI for HAPs facilities.

For more information on compliance of the NEI for HAPs with new OMB Information Quality Guidelines and new EPA data standards, please refer to the following web site for a paper presented at the 2003 Emission Inventory Conference in San Diego. "The Challenge of Meeting New EPA Data Standards and Information Quality Guidelines in the Development of the 2002 NEI Point Source Data for HAPs", Anne Pope, et al. www.epa.gov/ttn/chief/conference/ei12/dm/pope.pdf. The 2002 NEI for HAPs will undergo scientific peer review in early 2005.

The tables used in the EPA's Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html) are compiled assessments from various sources for many of the 188 substances listed as hazardous air pollutants under the Clean Air Act of 1990. Because different sources developed these assessments at different times for purposes that were similar but not identical, results are not totally consistent. To resolve these discrepancies and ensure the validity of the data, EPA applied a consistent priority scheme consistent with EPA risk assessment guidelines and various levels of scientific peer review. These risk assessment guidelines can be found at http://www.epa.gov/ncea/raf/car2sab/preamble.pdf .

Data Quality Review: EPA staff, state and local agencies, Tribes, industry and the public review the NTI and the NEI for HAPs. To assist in the review of the 1999 NEI for HAPs, the EPA provided a comparison of data from the three data sources (MACT/residual risk data, TRI, and state, local and Tribal inventories) for each facility. For the 1999 NEI for HAPs, two periods were available for external review - October 2001 - February 2002 and October 2002 - March 2003. The final 1999 NEI was completed and posted on the Agency website in the fall of 2003. Beginning in 2005, the NTI will undergo an external scientific peer review.

The EMS-HAP has been subjected to the scrutiny of leading scientists throughout the country in a process called "scientific peer review". This ensures that EPA uses the best available scientific methods and information. In 2001, EPA's Science Advisory Board (SAB) reviewed the EMS-HAP model as part of the 1996 national-scale assessment. The review was generally supportive of the assessment purpose, methods, and presentation; the committee considers this an important

step toward a better understanding of air toxics. Additional information is available on the Internet: www.epa.gov/ttn/atw/nata/peer.html.

The data compiled in the Health Criteria Data for Risk Characterization (found at www.epa.gov/ttn/atw/toxsource/summary.html) are reviewed to make sure they support hazard identification and dose-response assessment for chronic exposures as defined in the National Academy of Sciences (NAS) risk assessment paradigm (www.epa.gov/ttn/atw/toxsource/paradigm.html). Because the health criteria data were obtained from various sources they are prioritized for use (in developing the performance measure, for example) according to 1) conceptual consistency with EPA risk assessment guidelines and 2) various levels of scientific peer review. The prioritization process is aimed at incorporating the best available scientific data.

Data Limitations and Error Estimates: While emissions estimating techniques have improved over the years, broad assumptions about the behavior of sources and serious data limitations still exist. The NTI and the NEI for HAPs contain data from other primary references. Because of the different data sources, not all information in the NTI and the NEI for HAPs has been developed 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 baseline NTI, it is currently not suitable for input to dispersion models. For further discussion of the data limitations and the error estimates in the 1999 NEI for HAPs, please refer to the discussion of Information Quality Guidelines in the documentation at: www.epa.gov/ttn/chief/net/index.html#haps99 .

In 2004, the Office of the Inspector General (OIG) released a final evaluation report on "EPA's Method for Calculating Air Toxics Emissions for Reporting Results Needs Improvement" (report can be found at www.epa.gov/oig/reports/2004/20040331-2004-p-00012.pdf). The report stated that although the methods used have improved substantially, unvalidated assumptions and other limitations underlying the NTI continue to impact its use as a GPRA performance measure. As a result of this evaluation and the OIG recommendations for improvement, EPA prepared an action plan and is looking at ways to improve the accuracy and reliability of the data. EPA will meet bi-annually with OIG to report on its progress in completing the activities as outlined in the action plan.

While the Agency has made every effort to utilize the best available science in selecting appropriate health criteria data for toxicity-weighting calculations there are inherent limitations and errors (uncertainties) associated with this type of data. While it is not practical to expose humans to chemicals at target doses and observe subsequent health implications over long periods of time, most of the agencies health criteria is derived from response models and laboratory experiments involving animals. The parameter used to convert from exposure to cancer risk (i.e. the Unit Risk Estimate or URE) is based on default science policy processes used routinely in EPA assessments. First, some air toxics are known to be carcinogens in animals but lack data in humans. These have been assumed to be human carcinogens. Second, all the air toxics in this assessment were assumed to have linear relationships between exposure and the probability of cancer (i.e. effects at low exposures were extrapolated from higher, measurable, exposures by a straight line). Third, the URE used for some air toxics compounds represents a

maximum likelihood estimate, which might be taken to mean the best scientific estimate. For other air toxics compounds, however, the URE used was an "upper bound" estimate, meaning that it probably leads to an overestimation of risk if it is incorrect. For these upper bound estimates, it is assumed that the URE continues to apply even at low exposures. It is likely, therefore, that this linear model over-predicts the risk at exposures encountered in the environment. The cancer weighting-values for this approach should be considered "upper bound" in the science policy sense.

All of the noncancer risk estimates have a built-in margin of safety. All of the Reference Concentrations (RfCs) used in toxicity-weighting of noncancer are conservative, meaning that they represent exposures which probably do not result in any health effects, with a margin of safety built into the RfC to account for sources of uncertainty and variability. Like the URE used in cancer weighting the values are, therefore, considered "upper bound" in the science policy sense. Further details on limitations and uncertainties associated with the agencies health data can be found at: www.epa.gov/ttn/atw/nata/roy/page9.html#L10

New/Improved Data or Systems: The 1996 NTI and 1999 NEI for HAPs are a significant improvement over the baseline NTI because of the added facility-level detail (e.g., stack heights, latitude/longitude locations), making it more useful for dispersion model input. Future inventories (2002 and later years) are expected to improve significantly because of increased interest in the NEI for HAPs by regulatory agencies, environmental interests, and industry, and the greater potential for modeling and trend analysis. During the development of the 1999 NEI for HAPs, all primary data submitters and reviewers were required to submit their data and revisions to EPA in a standardized format using the Agency's Central Data Exchange (CDX). For more information on CDX, please go the following web site: www.epa.gov/ttn/chief/nif/cdx.html

Beginning in 2006, the toxicity-weighted emission inventory data will also be used as a measurement to predict exposure and risk to the public. This measure will utilize ambient monitoring of air toxics as a surrogate for population exposure and compare these values with health benchmarks to predict risks.

References:

The NTI and NEI data and documentation are available at the following sites:

Emissions Inventory Data:	ftp://ftp.epa.gov/EmisInventory/
Available inventories:	1996 NTI, 1999 NEI for HAPs
Contents:	Modeling data files for each state
	Summary data files for nation
	Documentation
	README file
Audience:	individuals who want full access to NTI files
NEON:	http://ttnwww.rtpnc.epa.gov/Neon/
Available inventories:	1996 NTI and 1999 NEI for HAPs

Contents:	Summary data files
Audience:	EPA staff

CHIEF:	www.epa.gov/ttn/chief 1999 NEI for HAPs data development materials 1999 Data Incorporation Plan - describes how EPA compiled the 1999 NEI for HAPs QC tool for data submitters Data Augmentation Memo describes procedures EPA will use to augment data 99 NTI Q's and A's provides answers to frequently asked questions NIF (Input Format) files and descriptions CDX Data Submittal Procedures - instructions on how to submit data using CDX Training materials on development of HAP emission inventories Emission factor documents, databases, and models
Audience:	State/local/Tribal agencies, industry, EPA, and the public

Information on the Emissions Modeling System for Hazardous Air Pollutants:

EMS-HAP:	http://epa.gov/scram001/tt22.htm#aspen http://www.epa.gov/ttn/chief/emch/projection/emshap.html
Contents:	1996 NTI and 1999 NEI for HAPs
Audience:	public

Information on EPA's Health Criteria Data for Risk Characterization:

Health Criteria Data:	http://www.epa.gov/ttn/atw/toxsource/summary.html
Contents:	Tabulated dose response values for long-term (chronic) inhalation and oral exposures; and values for short-term (acute) inhalation exposure
Audience:	public

GOAL 1 OBJECTIVE 2

FY 2009 Performance Measures:

- Number of additional homes (new and existing) with radon reducing features (PART measure)
- Total cost (public and private) per future premature lung cancer death prevented through lowered radon exposure (PART efficiency measure)

Performance Database: Annual industry survey data of home builders provided by the National Association of Home Builders and internal database of fan sales.

Data Source: The survey is an annual sample of home builders in the United States most of whom are members of the National Association of Home Builders (NAHB). NAHB members

construct 80% of the homes built in the United States each year. Using a survey methodology reviewed by EPA, NAHB Research Center 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. NAHB Research Center has been conducting this annual builder practices survey for over a decade, and has developed substantial expertise in the survey's design, implementation, and analysis. The statistical estimates are typically reported with a 95 percent confidence interval.

Radon fan manufacturers report fan sales to the Agency. EPA assumes one fan per radon mitigated home, and a fan life of 10 years, and then multiplies the assumed number of working fans by the assumed average of 2.67 people per household.

To estimate the reduced number of lung cancer deaths resulting from lowered radon exposure, EPA applies risk reduction estimates from its 2003 radon risk assessment to the number of existing homes mitigated for elevated radon levels and the number of new homes built with radon resistant new construction. Cost estimate includes both public and private sector costs, using EPA's 2003 estimate as a baseline.

Methods, Assumptions, and Suitability: NAHB Research Center conducts an annual survey of home builders in the United States to assess a wide range of builder practices. NAHB Research Center voluntarily conducts this survey to maintain an awareness of industry trends in order to improve American housing and to be responsive to the needs of the home building industry. The annual survey gathers information such as types of houses built, lot sizes, foundation designs, types of lumber used, types of doors and windows used, etc. The NAHB Research Center Builder Survey also gathers information on the use of radon-resistant design features in new houses, and these questions comprise about two percent of the survey questionnaire.

In January of each year, the survey of building practices for the preceding calendar year is typically mailed out to home builders. For the most-recently completed survey, for building practices during calendar year 2003, NAHB Research Center reported mailing the survey to about 45,000 active United States home building companies, and received about 2,300 responses, which translates to a response rate of about 5 percent. The survey responses are analyzed, with respect to State market areas and Census Divisions in the United States, to assess the percentage and number of homes built each year that incorporate radon-reducing features. The data are also used to assess the percentage and number of homes built with radon-reducing features in high radon potential areas in the United States (high risk areas). Other analyses include radon-reducing features as a function of housing type, foundation type, and different techniques for radon-resistant new home construction. The data are suitable for year-to-year comparisons.

This measure is a combination of data that includes additional number of homes built with radon resistant new construction (RRNC), reported by industry on an annual basis, as well as additional radon mitigations which are estimated from annual radon fan sales.

QA/QC Procedures: Because data are obtained from an external organization, QA/QC procedures are not entirely known. According to NAHB Research Center, QA/QC procedures

have been established, which include QA/QC by the vendor that is utilized for key entry of data. Because fan sales data are obtained from an external organization, EPA relies on the business practices of radon fan manufacturers for reporting the data.

Data Quality Review: Because data are obtained from an external organization, Data Quality Review procedures are not entirely known. NAHB Research Center indicates that each survey is manually reviewed, a process that requires several months to complete. The review includes data quality checks to ensure that the respondents understood the survey questions and answered the questions appropriately. NAHB Research Center also applies checks for open-ended questions to verify the appropriateness of the answers. In some cases, where open-ended questions request numerical information, the data are capped between the upper and lower three percent of the values provided in the survey responses. Also, a quality review of each year's draft report from NAHB Research Center is conducted by the EPA project officer. Fan sales data are obtained from an external organization and EPA reviews the data to ascertain their reliability and discusses any irregularities with the relevant manufacturer.

Data Limitations: The majority of home builders surveyed are NAHB members. The NAHB Research Center survey also attempts to capture the activities of builders that are not members of NAHB. Home builders that are not members of NAHB are typically smaller, sporadic builders that in some cases build homes as a secondary profession. To augment the list of NAHB members in the survey sample, NAHB Research Center sends the survey to home builders identified from mailing lists of builder trade publications, such as Professional Builder magazine. There is some uncertainty as to whether the survey adequately characterizes the practices of builders who are not members of NAHB. The effects on the findings are not known.

Although an overall response rate of 5 percent could be considered low, it is the response rate for the entire survey, of which the radon-resistant new construction questions are only a very small portion. Builders responding to the survey would not be doing so principally due to their radon activities. Thus, a low response rate does not necessarily indicate a strong potential for a positive bias under the speculation that builders using radon-resistant construction would be more likely to respond to the survey. NAHB Research Center also makes efforts to reduce the potential for positive bias in the way the radon-related survey questions are presented.

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, there is again the possibility that the number of radon mitigated homes has been underestimated.

No radon vent fan manufacturer, vent fan motor maker or distributor is required to report to EPA; they provide data/information voluntarily to EPA. There are only four (4) radon vent fan manufacturers of any significance; one of these accounts for an estimated 70% of the market. Radon vent fans are unlikely to be used for non-radon applications. However, vent fans typically used for non-radon applications are perhaps being installed as substitutes for radon vent fans in

some instances; estimated to be less than 1% of the total market. Ascertaining the actual number of radon vent fans used for other applications, and the number of non-radon fans being substituted in radon applications, would be difficult and expensive at this time relative to the benefit of having such data.

Error Estimate: See Data Limitations

New/Improved Data or Systems: None

References: The results are published by the NAHB Research Center in annual reports of radon-resistant home building practices. See http://www.nahbrc.org/ last accessed 7/25/2007 for more information about NAHB. The most recent report, "Builder Practices Report: Radon Reducing Features in New Construction 2003,"Annual Builder and Consumer Practices Surveys by the NAHB Research Center, Inc., November, 2004. Similar report titles exist for prior years.

See http://www.epa.gov/iaq/radon/pubs/index.html last accessed 7/25/2007 for National performance/progress reporting (National Radon Results: 1985-to 2003) on radon, measurement, mitigation and radon-resistant new construction.

FY 2009 Performance Measures:

- **Number of people taking all essential actions to reduce exposure to indoor environmental asthma triggers (PART measure)**
- **Annual cost to EPA per person with asthma taking all essential actions to reduce exposure to indoor environmental asthma triggers (PART efficiency measure)**

Performance Database: The *National Survey on Environmental Management of Asthma and Children's Exposure to ETS* (NSEMA) provides information about the measures taken by people with asthma, and parents of children with asthma, to minimize exposure to indoor environmental asthma triggers, including environmental tobacco smoke (ETS). Additional information about asthma morbidity and mortality in the US is obtained from surveys conducted by the Centers for Disease Control and Prevention (CDC), including the National Health Interview Survey, the National Health and Nutrition Examination Survey, and the Behavioral Risk Factor Surveillance Survey. Annual expenditures for health and lost productivity due to asthma are obtained from the National Heart Lung and Blood Institute (NHLBI) Chartbook www.nhlbi.nih.gov/resources/docs/04_chtbk.pdf. last accessed 7/25/2007.

EPA also collects data on children exposed to environmental tobacco smoke in the home. This information is used in supporting the asthma goals of the program. EPA focuses its work on ETS on children in low income and minority populations, and on children with asthma. In addition to NSEMA, information about ETS is obtained periodically from the CDC studies cited above

Data Source: The *NSEMA* (OMB control number 2060-0490) source is EPA. Data on asthma morbidity and mortality is available from the National Center for Health Statistics at the CDC (www.cdc.gov/nchs last accessed 7/25/2007). Data on annual expenditures for health and lost productivity due to asthma are obtained from the NHLBI Chartbook.

(www.nhlbi.nih.gov/resources/docs/04_chtbk.pdf. last accessed 7/25/2007). EPA will gather asthma trigger data through questions that are being integrated into a CDC survey. Essential actions address mold, dust mites, secondhand smoke, cockroaches, pets, nitrogen dioxide, and chemical irritants. Cost includes EPA full cost of implementing the asthma program.

Methods, Assumptions and Suitability: End-of–year performance for the asthma program is a best professional estimate using all data sources (including information on annual measures on partner performance and advertising awareness outlined below). The estimate of the number of people with asthma who have taken steps to reduce their exposure to indoor environmental asthma triggers as of 2007 will be based on a projection from previous surveys, and this estimate will be verified using a national survey instrument in 2009. EPA is collaborating with CDC to integrate questions on environmental management of asthma into an existing CDC national survey mechanism to provide performance results data in the future. Also, data provided for the annual measures are used to support progress towards the long term performance measure.

The *NSEMA* (OMB control number 2060-0490) is the most robust data set for this performance measure, but it is not administered annually. The first survey, administered in 2003, was designed in consultation with staff from EPA and the CDC National Center for Health Statistics (NCHS) to ensure that respondents will understand the questions asked and will provide the type of data necessary to measure the Agency's objectives. In addition, care has been taken to ensure that the survey questions target the population with asthma by using the same qualifier question that appears on other national surveys on asthma collected by the CDC.

QA/QC Procedures: The *NSEMA* was designed in accordance with approved Agency procedures. Additional information is available on the Internet: http://www.epa.gov/icr/players.html. The computer assisted telephone interview methodology used for this survey helps to limit errors in data collection. In addition, the QA/QC procedures associated with conducting the survey include pilot testing of interview questions, interviewer training to ensure consistent gathering of information, and random data review to reduce the possibility of data entry error.

Data Quality Review: EPA reviews the data from all sources to ascertain reliability.

Data Limitations: Asthma: The survey is subject to inherent limitations of voluntary telephone surveys of representative samples. For example, 1) survey is limited to those households with current telephone service; 2) interviewers may follow survey directions inconsistently. An interviewer might ask the questions incorrectly or inadvertently lead the interviewee to a response; or 3) the interviewer may call at an inconvenient time (i.e., 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.).

ETS: Currently available cotinine (a chemical in environmental tobacco smoke) survey data do not address 50% of the age specific portion of EPA's target population. It does not include birth to three years old, the portion of children most susceptible to the effects of ETS.

Error Estimate: In 2003 collection with this instrument, the Agency achieved results within the following percentage points of the true value at the 95 percent confidence level (survey instrument):

Adult Asthmatics	plus or minus	2.4%
Child Asthmatics	plus or minus	3.7%
Low Income Adult Asthmatics	plus or minus	6.1%

These precision rates are sufficient to characterize the extent to which the results measured by the survey accurately reflect the characteristics of our nation's asthmatic population.

New/Improved Data or Systems: EPA is collaborating with CDC to integrate questions on environmental management of asthma into an existing CDC national survey mechanism to provide performance results data in the future. The 2003 NSEMA estimates, and the integration of the CDC survey population, will provide consistent tracking measures at a reduced cost, while reducing the burden to the public. This collaboration will improve national asthma surveillance efforts.

References:

Asthma

National Center for Health Statistics, Centers for Disease Control and Prevention (www.cdc.gov/nchs/ last accessed 7/25/2007)

EPA Indoor Environments Division (www.epa.gov/iaq/ last accessed 7/25/2007)

ETS

National Health Interview Survey and National Health and Nutrition Examination Survey are part of the National Center for Health Statistics, Centers for Disease Control and Prevention (http://www.cdc.gov/nchs last accessed 7/25/2007)

Behavioral Risk Factor Surveillance Survey, Centers for Disease Control and Prevention (http://www.cdc.gov/brfss/index.htm last accessed 7/25/2007),

US Surgeon General's report on tobacco (http://www.cdc.gov/tobacco/sgr/index.htm/ last accessed 7/25/2007),

National Cancer Institute's (NCI) *Tobacco Monograph Series* (http://cancercontrol.cancer.gov/tcrb/monographs/ last accessed 7/25/2007),

NCI funded *Tobacco Use Supplement* portion of the US Census Bureau's *Current Population Survey* (http://riskfactor.cancer.gov/studies/tus-cps/ last accessed 7/25/2007),

Healthy People 2010 (http://www.healthypeople.gov/ last accessed 7/25/2007).

FY 2009 Performance Measure:

- **Additional health care professionals trained annually by EPA and its partners on the environmental management of asthma triggers (PART measure)**

Performance Database: The performance database consists of quarterly Partner status reports used to document the outcomes of individual projects.

Data Source: Partner status reports are generated by those organizations receiving funding from EPA and are maintained by individual EPA Project Officers.

Methods, Assumptions and Suitability: On an annual basis, EPA requires (programmatic terms and conditions of the award) all funded organizations to provide reports identifying how many health care professionals are educated about indoor asthma triggers.

QA/QC Procedures: It is assumed that organizations report data as accurately and completely as possible; site-visits are conducted by EPA project officers.

Data Quality Review: Project officers review data quality.

Data Limitations: N/A

New/Improved Data or Systems: EPA is exploring the development of a centralized data base.

References: N/A

FY 2009 Performance Measure:

- **Percent of public that is aware of the asthma program's media campaign (PART measure)**

Performance Database: A media tracking study used to assess behavior change within that sector of the public viewing the public service announcements.

Data Source: An independent initiative of the Advertising Council provides media tracking of outcomes of all their public service campaigns and this is publicly available information.

Methods, Assumptions and Suitability: Methods are those of the Advertising Council, and not controlled by EPA.

QA/QC Procedures: Methods are those of the Advertising Council, and not controlled by EPA.

Data Quality Review: Methods are those of the Advertising Council, and not controlled by EPA.

Data Limitations: Methods are those of the Advertising Council, and not controlled by EPA.

New/Improved Data or Systems: Methods are those of the Advertising Council, and not controlled by EPA.

References: Advertising Council Reporting. EPA Assistance Agreement number X-82820301. For additional information see the Ad Council web site http://www.adcouncil.org/ last accessed 7/25/07.

FY 2009 Performance Measures:

- **Estimated annual number of schools establishing Indoor Air Quality programs based on EPA's Tools for Schools guidance (PART measure)**
- **Total number of schools implementing an effective Indoor Air Quality plan (PART measure)**
- **Average cost to EPA per student per year in a school that is implementing an indoor air quality plan. (PART efficiency measure)**

Performance Database:

EPA collects national data by conducting a survey of indoor air quality management practices in schools approximately every three years. The first survey was administered in 2002. EPA is partnering with CDC to incorporate IAQ management practice indicators, consistent with the benchmark survey, into the School Health Policies and Programs Study (SHPPS) to be administered in 2006. The SHPSS survey is conducted at 6 year intervals so the next nationally representative data would be collected in 2012 and would measure progress against the long term 2012 program goal.

To measure annual progress, EPA estimates the number of schools who establish IAQ Tools for Schools (TfS) programs each year from reports from partner organizations and regional recruiters, supplemented by tracking the volume of guidances distributed and number of people trained by EPA and its partners. EPA also collects information on program benefits such as reduced school nurse visits, improved workplace satisfaction among staff, reduced absenteeism, and cost savings experienced by schools.

Data Source: The sources of the data include cooperative partners, USEPA and the statistical sample of all the public and private schools in the nation during the 1999 – 2000 school year (118,000); data are from the United States Department of Education National Center for Education Statistics.

On a 6 year basis, EPA collaborates with CDC to determine the number of schools implementing an IAQ plan. Effectiveness is defined as a plan that is consistent with EPA's Tool for Schools guidance and scores a 70 or higher on EPA's IAQ management index.

Total Number of students is derived from the number of schools multiplied by the nationwide average of 525 students, faculty and staff. Effectiveness is defined as a plan that is consistent with EPA's Tool for Schools guidance and scores a 70 or higher on EPA's indoor air quality (IAQ) management index. Cost includes EPA full cost of implementing IAQ programs.

Methods, Assumptions and Suitability: Calculations for the number of people experiencing improved IAQ are based upon an average 525 students, staff and faculty per school (data are from the United States Department of Education National Center for Education Statistics). That number, along with the number of schools that are adopting/implementing TfS, are used to estimate the performance result.

End-of–year performance is a best professional estimate using all data sources. The survey provides more statistically sound results for one period of time; the next scheduled survey will provide performance results for year 2006. Key portions of EPA's 2006 survey will be included as part of CDC's 2006 School Health Policies and Programs Study, which is conducted every six years.

QA/QC Procedures: It is assumed that partner organizations report data as accurately and completely as possible; site visits and regular communication with grantees are conducted by EPA projects officers.

Data Quality Review: EPA reviews the data from all sources in the performance database to ascertain reliability and to resolve any discrepancies.

Data Limitations: The primary limitation associated with Cooperative Agreement Partner status reporting is the error introduced as a result of self-reporting.

Error Estimate: Not relevant for this year.

New/Improved Data or Systems: Prior to the 2002 survey, EPA tracked the number of schools receiving the TfS guidance and estimated the population of the school to determine the number of students/staff experiencing improved indoor air quality. The survey was administered to establish a baseline for schools implementing IAQ management practices. EPA queried a statistically representative sample of schools to estimate the number of schools that have actually adopted and implemented good IAQ management practices consistent with the TfS guidance. EPA has integrated key portions of the 2002 survey into CDC's School Health Policies and Programs Study, which will show progress from the baseline.

References: See the United States Department of Education National Center for Education Statistics, http://nces.ed.gov/ last accessed 7/26/2007. See also Indoor Air Quality Tools for Schools Kit (402-K-95-001) at http://www.epa.gov/iaq/schools last accessed 7/26/2007 and see www.cdc.gov/nccdphp/dash/shpps/ *For additional information about the* School Health Policies and Programs Study (SHPPS), a national survey periodically conducted to assess school health policies and programs at the state, district, school, and classroom levels.

GOAL 1 OBJECTIVE 3

FY 2009 Performance Measure:

- **Remaining US consumption of HCFCs, measured in tons of ozone depleting potential (ODP) (PART measure)**

Performance Database: The Allowance Tracking System (ATS) database is maintained by the Stratospheric Protection Division (SPD). ATS is used to compile and analyze quarterly information on U.S. production, imports, exports, transformations, and allowance trades of ozone-depleting substances (ODS).

Data Source: Progress on restricting domestic exempted consumption of Class II HCFCs is tracked by monitoring industry reports of compliance with EPA's phase-out regulations. Data are provided by U.S. companies producing, importing, and exporting ODS. Corporate data are typically submitted as quarterly reports. Specific requirements as outlined in the Clean Air Act are available on the Internet at: http://www.epa.gov/oar/caa/caa603.txt. Monthly information on domestic production, imports, and exports from the International Trade Commission is maintained in the ATS.

Methods, Assumptions and Suitability: Data are aggregated across all U.S. companies for each individual ODS to analyze U.S. total consumption and production.

QA/QC Procedures: Reporting and record-keeping requirements are published in 40 CFR Part 82, Subpart A, Sections 82.9 through 82.13. These sections of the Stratospheric Ozone Protection Rule specify the required data and accompanying documentation that companies must submit or maintain on-site to demonstrate their compliance with the regulation.

The ATS data are subject to a Quality Assurance Plan (Quality Assurance Plan, USEPA Office of Atmospheric Programs, July 2002). In addition, the data are subject to an annual quality assurance review, coordinated by Office of Air and Radiation (OAR) staff separate from those on the team normally responsible for data collection and maintenance. The ATS is programmed to ensure consistency of the data elements reported by companies. The tracking system flags inconsistent data for review and resolution by the tracking system manager. This information is then cross-checked with compliance data submitted by reporting companies. SPD maintains a user's manual for the ATS that specifies the standard operating procedures for data entry and data analysis. Regional inspectors perform inspections and audits on-site at the producers', importers', and exporters' facilities. These audits verify the accuracy of compliance data submitted to EPA through examination of company records.

Data Quality Reviews: The Government Accounting Office (GAO) completed a review of U.S. participation in five international environmental agreements, and analyzed data submissions from the U.S. under the Montreal Protocol on Substances the Deplete the Ozone Layer. No deficiencies were identified in their January 2003 report.

Data Limitations: None, since companies are required by the Clean Air Act to report data. EPA's regulations specify a quarterly reporting system.

Error Estimate: None.

New/Improved Data or Systems: The Stratospheric Protection Division is developing a system to allow direct electronic reporting.

References: See http://www.epa.gov/ozone/desc.html for additional information on ODSs. See http://www.unep.ch/ozone/montreal.shtml for additional information about the Montreal Protocol. See http://www.unmfs.org/ for more information about the Multilateral Fund. Quality Assurance Plan, USEPA Office of Atmospheric Programs, July 2002

GOAL 1 OBJECTIVE 4

FY 2009 Performance Measure:

- **Percentage of most populous U.S. cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations. (PART measure)**

Performance Database: EPA database of RadNet program expansion. Data from the near real time gamma component of the ambient air radiation monitoring system, RadNet, will be stored in the EPA RadNet database at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, AL.

Data Source: Data on the number and location of monitors will be stored in the NAREL RadNet program expansion database; U.S. Census Bureau population data will be used to calculate 100 most populous cities; environmental data from the RadNet system will be stored in the NAREL RadNet database.

Methods and Assumptions: These monitors will provide data on ambient environmental levels of radiation on an ongoing basis and in the event of a radioactive contamination event.

Suitability: This measure was selected to show the implementation of the fixed monitoring network and the benefit to population. Over time, once the system is fully implemented, this measure will become obsolete.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with the RadNet Quality Assurance Project Plan once it is complete (scheduled to be finalized in early 2008). Laboratory analyses of air filters and other media, as well as all calibrations, are closely controlled in compliance with the NAREL Quality Management Plan and applicable Standard Operating Procedures (EPA Office of Radiation and Indoor Air (ORIA), National Air and Radiation Environmental Laboratory Quality Management Plan Revision 1, dated March 15, 2001 and reaffirmed August 23, 2006).

Data Quality Review: Science Advisory Review Board reviewed and analyzed the RadNet system and presented their suggestions for the expansion and upgrade of the system. Advice on siting of the monitors was presented to EPA. (EPA SAB Report, Review of 2005 Agency Draft entitled "Expansion and Upgrade of the RadNet Air Monitoring Network, Vol. 1 & 2, Concept

and Plan," Quality Review Draft, 8/17/06) http://epa.gov/sab/pdf/radnet_final_qual_rev_draft_08-17-06.pdf (504k pdf)

Data Limitations: N/A.

Error Estimate: It is not anticipated that significant error will occur in tracking the number of monitors placed in cities.

New/Improved Data or Systems: None planned at this time.

References: For more information about the system, see: www.epa.gov/narel/radnet \

FY 2009 Performance Measure:

- **Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations (measured as percentage of radiation response team members and assets that meet scenario-based response criteria). (PART measure)**

Performance Database: Internal Database

Data Source: Annual measurement of readiness based on an evaluation of the emergency response assets.

Methods and Assumptions: EPA developed standardized criteria based on the functional requirements identified in the National Response Plan's Nuclear/Radiological Incident Annex and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A baseline analysis for the Radiological Emergency Response Team (RERT) was performed in 2005, for EAP Headquarters and is based on the effectiveness of the RERT during incidents and national exercises.

Suitability: This measure and its criteria were developed to compliment Department of Homeland Security criteria as well as those of the EPA Core Emergency Response and Removal (Core ER) program evaluation measures.

QA/QC Procedures: An evaluation panel consisting of three representatives from the Radiological Emergency Response Team (RERT), one from each Office of Radiation and Indoor Air (ORIA) Laboratory and one from ORIA Headquarters, and ORIA management representatives (including at least one representative from outside the ORIA Radiological Emergency Response Program) annually perform a critical evaluation of ORIA's Radiological Emergency Response Program's capabilities versus the standardized criteria, resulting in an overall annual percentage score, as well as component percentage scores. Representatives will not be involved in the evaluation of their own location. Members are chosen based on volunteerism and by lottery on an annual basis. The Panel is chaired by the non-RERT management representative

Data Quality Review: Evaluation information is provided to the ORIA Office Director annually for use in evaluating progress. Data quality is certified by the Laboratory Directors at the Radiation and Indoor Environments National Laboratory and the National Air and Radiation Environmental Laboratory as well as by the Division Director of the Radiation Protection Division.

Data Limitations: None known

Error Estimate: None known

New/Improved Data or Systems: N/A

References: Radiological Emergency Response Measurement Implementation Plan: Long-Term Outcome Performance Measure, Readiness. FY 2007 Radiation PART Assessment (Draft: 7/25/2007)

FY 2009 Performance Measure:

- **Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions). (PART Measure)**

Performance Database: Internal Database.

Data Source: EPA will conduct laboratory assessments between years 2006 to 2011 to determine commercial, state and federal laboratory capability, capacity, and qualifications. This is a phased-in approach and initial work has already begun. In 2007, EPA has conducted an initial capacity and capability survey of select commercial radiation laboratories.

Methods and Assumptions: The percentage laboratory capacity that is needed is based on the Homeland Security Council Radiological Attack, Radiological Dispersal Device Scenario. Similarly, radiological scenario analytical needs will be based on the Homeland Security Council Radiological Dispersion Device (RDD) Scenario. Laboratory capacity determines, for example, equipment needs, whereas, analytical needs measurement determines expert modeling capability, etc. Both are important factors in determining level of readiness. Increased laboratory capacity for those laboratories assisted through EPA guidance and training will be calculated.

Suitability: This measure is critical to identifying level of readiness relative to radiological laboratory capacity in the event of an incident of national significance.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with EPA's Office of Radiation and Indoor Air Quality Management Plan Revision, dated October 2004.

Data Quality Review: Information gained from the laboratory assessments with respect to capacity and ability to meet method validation protocols will be used to determine laboratory capacity, which adheres to EPA quality criteria.

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Radiological Emergency Response Measurement Implementation Plan: Long-Term Outcome Performance Measure, Readiness. FY 2007 Radiation PART Assessment (Draft: 7/25/2007)

FY 2009 Performance Measure:

- **Average time of availability of quality assured ambient radiation air monitoring data during an emergency. (PART Measure)**

Performance Database: Data from the near real-time gamma component RadNet will be stored in an internal EPA database at the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama.

Data Source: The baseline for this measure is the current calculated response time which is based on shipment time and laboratory analysis time. As real-time monitors are put into service, the efficiency of the system will increase. Near real-time units will have reliable data in hours compared to days for conventional monitors, which are dependent on shipment and analysis time of samples.

Methods and Assumptions: The time between data collection at the monitoring sites and availability of data for release by EPA will be determined annually for the system as a whole, including existing (legacy) monitors and new near real-time monitors. The efficiency data will be compiled from existing and ongoing operational records of RadNet.

The monitoring system efficiency is based on two assumptions: (1) 43 conventional (non-real-time) monitoring stations exist in the system before the addition of any real-time monitors, and (2) a baseline of two and one-half days (60 hours) are required for data to become available (during emergency conditions) from the 43 non-real-time monitors. The initial interval of 2.5 days assumes the network is in alert status when time counting begins. Six (6) hours is the time required for data to become available from the near real-time monitors.

Suitability: This measure provides key data regarding availability of data and operational readiness of the nationwide RadNet ambient radiation monitoring network.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with the RadNet Quality Assurance Project Plan once it is complete

(scheduled to be finalized in early 2008). Laboratory analyses of air filters and other media, as well as all calibrations, are closely controlled in compliance with the NAREL Quality Management Plan and applicable Standard Operating Procedures (EPA Office of Radiation and Indoor Air, National Air and Radiation Environmental Laboratory Quality Management Plan Revision 1, dated March 15, 2001 and reaffirmed August 23, 2006).

Data Quality Review: The database will screen all incoming data from the monitoring systems for abnormalities as an indicator of either a contamination event or an instrument malfunction. Data will be held in a secure portion of the database until verified by trained personnel. Copies of quality assurance and quality control testing will also be maintained to assure the quality of the data.

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: This measure will use data from the enhanced RadNet ambient air radiation monitoring system.

FY 2009 Performance Measure:

- **Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP**

Performance Database: Internal Database

Data Source: EPA has established a range of baseline data from existing records that indicate the date(s) of the EPA site inspection and the EPA approval date for waste streams and waste characterization equipment. EPA will measure the time between the DOE request for approval/notification of change (or the date of the inspection, if applicable) to the date of EPA approval, disapproval or concurrence of the change.

Methods and Assumptions: Under the new requirements of 40 CFR Part 194.8, EPA will perform a baseline inspection of each DOE waste generator site. If all requirements are met, EPA will approve the site's waste characterization program and assign tiers, based on abilities demonstrated during the baseline inspection. DOE will inform EPA of changes in the waste characterization program that can affect the quality of the data required by EPA to ensure the disposal regulations are met. The tiering protocol, which applies to waste streams, equipment, and procedures, will require DOE to either notify EPA of changes to the waste characterization program prior to implementation of the change (Tier 1) or to notify EPA of the changes upon implementation (Tier 2). For Tier 1 changes, EPA may request additional information or conduct an inspection prior to issuing an approval.

EPA assumes that adequate resources commensurate with the workload (which varies by up to 3 fold on an annual basis) are available and that sufficiently qualified EPA personnel and contractor consultants are available.

Suitability: This measure provides key information about the time required for EPA to approve DOE's request to dispose of transuranic waste at the WIPP site.

QA/QC Procedures: Quality Assurance and Quality Control Procedures will follow Agency guidelines and be consistent with EPA Office of Radiation and Indoor Air Quality Management Plan Revision, dated October 2004.

Data Quality Review: N/A

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: The Department of Energy National TRU Waste Management Plan Quarterly Supplement http://www.wipp.energy.gov/shipments.htm (last accessed 8/9/2007) contains information on the volumes of waste that are received at the DOE WIPP.

FY 2009 Performance Measure:

- **Population covered by Radiation Protection Program monitors per million dollars invested. (PART efficiency measure)**

Performance Database: EPA database of RadNet program expansion. The percent of the U.S. population covered is dependent on the number of monitors deployed and includes everyone in the continental U.S. within 25 miles of an ambient radiation monitor. Dollars invested includes the full budget of the Radiation Protection Program.

Data Source: The performance measurement data—percentage of U.S. population covered by the program—will be calculated annually from operational records maintained at the National Air and Radiation Environmental Laboratory. These records are an inherent part of program oversight and will not require special data collection efforts. U.S. population numbers are based on the Census 2000 from the U.S. Census Bureau. Program dollars are based on the full budget of the Radiation Protection Program, which will be retrieved from the EPA Financial Data Warehouse. The costs and data points produced will be determined annually for the system as a whole, including existing (legacy) monitors and new near real-time monitors.

Methods and Assumptions: This measure reflects the population covered (i.e., within 25 miles of a monitor) under an expanded and more robust system of radiation monitoring and assessment per program dollar. As such, it is a very conservative estimate of "coverage." In the event of a radiological emergency, the enhanced radiological monitoring system would support a number of response measures and activities that cover and apply to the population as a whole. This entails complete mobilization of EPA's Radiological Emergency Response Program and full deployment of all monitoring capability, including up to 40 portable RadNet monitors. The

efficiency measure is defined as the total costs (including FTE) to run both the legacy and near real-time systems, which will provide scientists, decision makers, and the public information on ambient radiation levels in airborne particulates under normal conditions or during radiological incidents. As real-time monitors are put into service, the efficiency of the system will increase dramatically. Near real-time units produce reliable data each hour as opposed to twice weekly for conventional (legacy) monitors, which are dependent on shipment and analysis time of samples.

Suitability: This measure provides key information about population covered (i.e., within 25 miles of a monitor) under an expanded and more robust system of radiation monitoring and assessment per program dollar.

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

GOAL 1 OBJECTIVE 5

FY 2009 Performance Measures:

- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the buildings sector (PART measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the industry sector (PART measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the transportation sector (PART measure)**

Performance Database: Climate Protection Partnerships Division Tracking System. The tracking system's primary purpose is to maintain a record of the annual greenhouse gas emissions reduction goals and accomplishments for the voluntary climate program using information from partners and other sources. It also measures the electricity savings and contribution towards the President's greenhouse gas intensity goal.

Data Source: EPA develops carbon and non-CO_2 emissions baselines. A baseline is the "business-as-usual" case without the impact of EPA's voluntary climate programs. Baseline data for carbon emissions related to energy use comes from the Energy Information Agency (EIA) and from EPA's Integrated Planning Model (IPM) of the U.S. electric power sector. These data are used for both historical and projected greenhouse gas emissions and electricity generation,

independent of partners' information to compute emissions reductions from the baseline and progress toward annual goals. The projections use a "Reference Case" for assumptions about growth, the economy, and regulatory conditions. Baseline data for non-carbon dioxide (CO_2) emissions, including nitrous oxide and other high global warming potential gases, are maintained by EPA. The non-CO2 data are compiled with input from industry and also independently from partners' information.

Data collected by EPA's voluntary programs include partner reports on facility- specific improvements (e.g. space upgraded, kilowatt-hours (kWh) reduced), national market data on shipments of efficient products, and engineering measurements of equipment power levels and usage patterns

Baseline information is discussed at length in the U.S. Climate Action Report 2002. The report includes a complete chapter dedicated to the U.S. greenhouse gas inventory (sources, industries, emissions, volumes, changes, trends, etc.). A second chapter addresses projected greenhouse gases in the future (model assumptions, growth, sources, gases, sectors, etc.)

U.S. Department of State. 2002. "U.S. Climate Action Report—2002. Third National Communication of the United States of America under the United Nations Framework Convention on Climate Change."

Partners do contribute *actual* emissions data biannually after their facility-specific improvements but these emissions data are not used in tracking the performance measure. EPA, however, validates the estimates of greenhouse gas reductions based on the actual emissions data received.

Methods, Assumptions, and Suitability: Most of the voluntary climate programs' focus is on energy efficiency. For these programs, EPA estimates the expected reduction in electricity consumption in kilowatt-hours (kWh). Emissions prevented are calculated as the product of the kWh of electricity saved and an annual emission factor (e.g., metric tons carbon equivalent (MMTCE) prevented per kWh). Other programs focus on directly lowering greenhouse gas emissions (e.g., Natural Gas STAR, Landfill Methane Outreach, and Coalbed Methane Outreach); for these, greenhouse gas emission reductions are estimated on a project-by-project basis. EPA maintains a Atracking system@ for emissions reductions.

The Integrated Planning Model, used to develop baseline data for carbon emissions, is an important analytical tool for evaluating emission scenarios affecting the U.S. power sector. The IPM has an approved quality assurance project plan that is available from EPA's program office.

QA/QC Procedures: EPA devotes considerable effort to obtaining the best possible information on which to evaluate emissions reductions from voluntary programs. Peer-reviewed carbon-conversion factors are used to ensure consistency with generally accepted measures of greenhouse gas (GHG) emissions, and peer-reviewed methodologies are used to calculate GHG reductions from these programs.

Partners do contribute *actual* emissions data biannually after their facility-specific improvements but these emissions data are not used in tracking the performance measure. EPA, however, validates the estimates of greenhouse gas reductions based on the actual emissions data received.

Data Quality Review: The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. The second such interagency evaluation, led by the White House Council on Environmental Quality, examined the status of U.S. climate change programs. The review included participants from EPA and the Departments of State, Energy, Commerce, Transportation, and Agriculture. The results were published in the *U.S. Climate Action Report-2002* as part of the United States' submission to the Framework Convention on Climate Change (FCCC). The previous evaluation was published in the *U.S. Climate Action Report-1997*. 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.

Error Estimate: These are indirect measures of GHG emissions. Although EPA devotes considerable effort to obtaining the best possible information on which to evaluate emissions reductions from its voluntary programs, errors in the performance data could be introduced through uncertainties in carbon conversion factors, engineering analyses, and econometric analyses. The only programs at this time aimed at avoiding GHG emissions are voluntary.

New/Improved Data or Systems: The Administration regularly evaluates the effectiveness of its climate programs through interagency evaluations. EPA continues to update inventories and methodologies as new information becomes available.

References: The U.S. Climate Action Report 2002 is available at: www.epa.gov/globalwarming/publications/car/index.html. The accomplishments of many of EPA's voluntary programs are documented in the Climate Protection Partnerships Division Annual Report. The most recent version is *Protecting the Environment Together: ENERGY STAR and other Voluntary Programs,* Climate Protection Partnerships Division 2003 Annual Report.

GOAL 1 OBJECTIVE 6

FY 2009 Performance Measures:

- **Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health (PART Measure)**

- **Percent of planned actions accomplished toward the long-term goal of reducing uncertainty in the science that supports the standard-setting and air quality management decisions (PART Measure)**

Performance Database: Integrated Resources Management System (internal database) and list of recommendations from the Board of Scientific Counselors (BOSC)

Data Source: Data are generated based on self-assessments of: 1) overall progress toward completing research goals, and 2) completion of distinct planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of the Clean Air Research Program's long-term goals, the program annually develops a list of key research milestones and outputs in support of the Multi-Year Plan that are scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time. Additionally, Clean Air research program "planned" actions include the completion of follow-up recommendations resulting from external peer reviews.

QA/QC Procedures: Procedures are now in place to require that all annual milestones be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management.

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Air Toxics Multi-Year Plan, available at: http://www.epa.gov/osp/myp/airtox.pdf (last accessed July 20, 2007)
Particulate Matter Multi-Year Plan, available at: http://www.epa.gov/osp/myp/pm.pdf (last accessed July 20, 2007)
National Ambient Air Quality Standards (NAAQS) Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Percentage of NAAQS program publications rated as highly cited papers (PART Measure).**

Performance Database: No internal tracking system.

Data Source: Searches of Thomson Scientific's *Web of Science* and *Scopus* are conducted to obtain "times cited" data for programs' publications. Analyses are completed using Thomson's *Essential Science Indicators (ESI)* and *Journal Citation Reports (JCR)* as benchmarks. *ESI* provides access to a unique and comprehensive compilation of essential science performance statistics and science trends data derived from Thomson's databases.

Methods, Assumptions and Suitability: For influence and impact measures, *ESI* employs both total citation counts by field and cites per paper scores. The former reveals gross influence while the latter shows weighted influence, also called impact. *JCR* is a recognized authority for evaluating journals. It presents quantifiable statistical data that provide a systematic, objective way to evaluate the world's leading journals and their impact and influence in the global research community. The two key measures used in this analysis to assess the journals in which a program's papers are published are the Impact Factor and Immediacy Index. The Impact Factor is a measure of the frequency with which the "average article" in a journal has been cited in a particular year. The Impact Factor helps evaluate a journal's relative importance, especially when compared to other journals in the same field.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Analyses do not capture citations within EPA regulations and other key agency documents.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Particulate Matter Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/dw_bibliometric_pm_only_0907.pdf (last accessed on Jan 4, 2007)

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART Efficiency Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References:
National Ambient Air Quality Standards (NAAQS) Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html (last accessed August 16, 2007)

GOAL 2 OBJECTIVE 1

FY 2009 Performance Measures:

- **Percent of the population served by community water systems that meet all applicable health-based drinking water standards through approaches including effective treatment and source water protection [PART measure]**
- Percent of the population in Indian country served by community water systems that receive drinking water that meets all applicable health-based drinking water standards [PART measure]
- Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards [PART measure]
- **Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection [PART measure]**
- **The percentage of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance). [PART measure]**

Performance Database: Safe Drinking Water Information System - Federal Version (SDWIS or SDWIS/FED). SDWIS contains basic water system information, population served, and detailed records of violations of the Safe Drinking Water Act and the statute's implementing health-based drinking water regulations. The performance measures are based on the population served by community water systems and the number of community water systems that were active during any part of the performance year and did not have any violations designated as "health based." Exceedances of a maximum contaminant level (MCL) and violations of a treatment technique are health-based violations. SDWIS has provided annual results for ten years and reports on a fiscal year basis.

Data Source: Data are provided by agencies with primacy (primary enforcement authority) for the Public Water System Supervision (PWSS) program. These agencies are either: States, EPA for non-delegated states or territories, and the Navajo Nation Indian tribe, the only tribe with primacy. Primacy agencies collect the data from the regulated water systems, determine compliance, and report a subset of the data to EPA (primarily inventory and summary violations).

Methods, Assumptions and Suitability: Under the drinking water regulations, water systems must use approved analytical methods for testing for contaminants. State certified laboratories report contaminant occurrence to states that, in turn, determine exceedances of maximum contaminant levels or non-compliance with treatment techniques and report these violations to EPA. These results are subject to periodic performance audits and compared to results that states report to SDWIS. Primacy agencies' information systems and compliance determinations are audited on an average schedule of once every 3 years, according to a protocol. To measure program performance, EPA aggregates the SDWIS data into national statistics on overall compliance with health-based drinking water standards using the measures identified above.

QA/QC Procedures: EPA conducts a number of Quality Assurance/Quality Control steps to provide high quality data for program use, including:

(1) SDWIS/FED edit checks built into the software to reject erroneous data.
(2) Quality assurance manuals for states and Regions, which provide standard operating procedures for conducting routine assessments of the quality of the data, including timely corrective action(s).
(3) Training to states on reporting requirements, data entry, data retrieval, and error correction.
(4) User and system documentation produced with each software release and maintained on EPA's web site. System, user, and reporting requirements documents can be found on the EPA web site, http://www.epa.gov/safewater/. System and user documents are accessed via the database link http://www.epa.gov/safewater/databases.html, and specific rule reporting requirements documents are accessed via the regulations, guidance, and policy documents link http://www.epa.gov/safewater/regs.html.
(5) Specific error correction and reconciliation support through a troubleshooter's guide, a system-generated summary with detailed reports documenting the results of each data submission, and an error code database for states to use when they have questions on how to enter or correct data.
(6) User support hotline available 5 days a week.

The SDWIS/FED equivalent of a quality assurance plan is the data reliability action plan[1] (DRAP). The DRAP contains the processes and procedures and major activities to be employed and undertaken for assuring the data in SDWIS meet required data quality standards. This plan has three major components: assurance, assessment, and control.

Data Quality Review: Data Quality Review: Routine data quality assurance and quality control analysis of SDWIS by the Agency revealed a degree of non-reporting of violations of health-based drinking water standards, and of violations of regulatory monitoring and reporting requirements. As a result, the Agency is now tracking and quantifying the quality of data reported to SDWIS/FED as part of the Agency's National Water Program Guidance. The Agency will continue follow and update the Data Reliability Implementation/Action Plan. EPA will continue to review the results of on-site data verification (and eDV) and initiate a discussion with individual states concerning any potential discrepancies with the data reported to SDWIS/FED. The on-site DV will be conducted as described in the Data Verification Protocol. Even as improvements are made, SDWIS serves as the best source of national information on compliance with Safe Drinking Water Act requirements for program management, the development of drinking water regulations, trend analyses, and public information.

Data Limitations: Recent state data verification and other quality assurance analyses indicate that the most significant data quality problem is under-reporting by the states of monitoring and health-based standards violations and inventory characteristics. The most significant under-reporting occurs in monitoring violations. Even though those are not covered in the health based violation category, which is covered by the performance measure, failures to monitor could mask treatment technique and MCL violations. Such under-reporting of violations limits EPA's ability to: 1) accurately portray the amount of people affected by health-based violations, 2) undertake geo-spatial analysis, 3) integrate and share data with other data systems, and 4) precisely quantify the population served by systems, which are meeting the health-based standards. Therefore, the estimates of population-served could be high or low. As described in the Data Quality Review section above, EPA is currently changing the protocol to enhance the results of data audits as the best near-term option to improve these estimates, while continuing to explore other approaches, including use of contaminant occurrence data.

Error Estimate: EPA will be analyzing data, derived from the improved data audit protocol, with a robust statistical basis from which to extrapolate national results, and better aligned with requirements of the Data Quality Act. The long-term value of the improved audit process is that each year's results will be statistically representative and provide information closer in time to the needed performance reporting; for example, 2006 results, the first year of the improved audit process will be reported in 2007.

New/Improved Data or Systems: Several approaches are underway.

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[1] *Data Reliability Action Plan*. U.S. EPA, October 2002. Office of Ground Water and Drinking Water internal work plan document. *Drinking Water Data Reliability Analysis and Action Plan (2003) For State Reported Public Water System Data In the EPA Safe Drinking Water Information System/Federal Version (SDWIS/FED)*

First, EPA will continue to work with states to implement the DRAP and ISP, which have already improved the completeness, accuracy, timeliness, and consistency of the data in SDWIS/FED through: 1) training courses for specific compliance determination and reporting requirements, 2) state-specific technical assistance, 3) increased number of data audits conducted each year, and 4) assistance to regions and states in the identification and reconciliation of missing, incomplete, or conflicting data.

Second, more states (as of January 2007, 53 States, Tribes, and territories are using SDWIS/STATE) will use SDWIS/STATE,[2] a software information system jointly designed by states and EPA, to support states as they implement the drinking water program.

Third, EPA has modified SDWIS/FED to (1) simplify the database, (2) minimize data entry options resulting in complex software, (3) enforce Agency data standards, and (4) ease the flow of data to EPA through a secure data exchange environment incorporating modern technologies, all of which will improve the accuracy of the data. In 2006, full use of SDWIS/FED for receiving state reports will be implemented. Data will be stored in a data warehouse system that is optimized for analysis, data retrieval, and data integration from other data sources. It will improve the program's ability to more efficiently use information to support decision-making and effectively manage the program.

Finally, EPA, in partnership with the states, is developing information modules or data systems on other drinking water programs: the Underground Injection Control Program (UIC) and the Drinking Water State Revolving Fund. These modules will be integrated with SDWIS to provide a more comprehensive data set with which to assess the nation's drinking water supplies, a key component of the goal. Plans have now been developed for design of systems to address these data flows. Developing the systems to receive the data is scheduled for 2007.

References:

Plans*

- SDWIS/FED does not have a Quality Assurance Project Plan - it is a legacy system which has "evolved" since the early 80s prior to the requirement for a Plan. The SDWIS/FED equivalent is the Data Reliability Action Plan
- Information Strategy Plan – SDWIS/FED (see footnote 2)
- Office of Water Quality Management Plan, available at http://www.epa.gov/water/info.html
- Enterprise Architecture Plan

Reports*

[2] SDWIS/STATE (Version 8.1) is an optional Oracle data base application available for use by states and EPA regions to support implementation of their drinking water programs.
U.S. EPA, Office of Ground Water and Drinking Water. Data and Databases. Drinking Water Data & Databases – SDWIS/STATE, July 2002. Information available on the Internet: http://www.epa.gov/safewater/sdwis_st/current.html

* These are internal documents maintained by EPA's Office of Ground Water and Drinking Water. Please call 202-564-3751 for further information.

- 1999 SDWIS/FED Data Reliability
- 2003 SDWIS/FED Data Reliability Report - contains the Data Reliability Action Plan and status report

Guidance Manuals, and Tools

- PWSS SDWIS/FED Quality Assurance Manual
- Various SDWIS/FED User and System Guidance Manuals (includes data entry instructions, data On-line Data Element Dictionary-a database application, Error Code Data Base (ECDB) - a database application, users guide, release notes, etc.) Available on the Internet at http://www.epa.gov/safewater/sdwisfed/sdwis.htm
- Regulation-Specific Reporting Requirements Guidance. Available on the Internet at http://www.epa.gov/safewater/regs.html

Web site addresses

- OGWDW Internet Site http://www.epa.gov/safewater/databases.html and contains access to the information systems and various guidance, manuals, tools, and reports.
- Sites of particular interest are:
  http://www.epa.gov/safewater/data/getdata.html contains information for users to better analyze the data, and
  http://www.epa.gov/safewater/sdwisfed/sdwis.htm contains reporting guidance, system and user documentation and reporting tools for the SDWIS/FED system.

FY 2009 Performance Measures:

- **Fund Utilization Rate for the DWSRF [PART measure]**
- **Number of additional projects initiating operations [PART measure]**

Performance Database: Drinking Water State Revolving Fund National Information Management System (DWNIMS.)

Data Sources: Data are entered by state regulatory agency personnel and by EPA's Regional staff; they are collected and reported once yearly.

Methods, Assumptions and Suitability: Data entered into DWNIMS directly represent the units of performance for the performance measure. These data are suitable for year-to-year comparison and trend indication.

QA/QC Procedures: EPA's headquarters and Regional offices are responsible for compiling the data and querying states as needed to assure data validity and conformance with expected trends. States receive data entry guidance from EPA headquarters in the form of annual memoranda (e.g., "2005 DWNIMS Data Collection.")

Data Quality Reviews: EPA's headquarters and Regional offices annually review the data submitted by the states. State data are publicly available at

http://www.epa.gov/safewater/dwsrf/dwnims.html in individual state reports. Headquarters addresses significant data variability issues directly with states or through the appropriate EPA Regional office. Additionally, EPA's contractor tests the data for logical consistency. An annual EPA headquarters' "DWNIMS Analysis" provides detailed data categorization and comparison. This analysis is used during:

1. Annual EPA Regional office and state reviews to identify potential problems with the program's pace which might affect the performance measure.
2. Reviews by EPA's headquarters of regional oversight of state revolving funds.
3. Annual reviews by EPA's Regional offices of their states' revolving funds operations.

State data quality is also evaluated during annual reviews performed by EPA Regions. Any inconsistencies that are found in need of correction are incorporated into future DWNIMS reports. These adjustments are historically rare and very minor.

Data Limitations: There are no known limitations in the performance data, which states submit voluntarily. Erroneous data can be introduced into the DWNIMS database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields have been largely reduced. These definitions are publicly available at: http://www.epa.gov/safewater/dwsrf/nims/dwdatadefs.pdf . There is typically a lag of approximately two months from the date EPA asks states to enter their data into the DWNIMS database, and when the data are quality-checked and available for public use.

New/Improved Data or Systems: This system has been operative since 1999. It is updated annually, and data fields are changed or added as needed.

References:
State performance data as shown in NIMS are available by state at:
http://www.epa.gov/safewater/dwsrf/dwnims.html
Definitions of data requested for each data field in NIMS is available at:
http://www.epa.gov/safewater/dwsrf/nims/dwdatadefs.pdf
2005 DWNIMS Data Collection – memo from Jeff Bryan, 7/12/05
DWNIMS analysis

FY 2009 Performance Measures:

- Percentage of identified Class V motor vehicle waste disposal wells closed or permitted.
- Percentage of Class I, II, and III wells that maintain mechanical integrity without a failure that releases contaminants to underground sources of drinking water.
- Percentage of prohibited Class IV and high-priority, identified, potentially endangering Class V wells closed or permitted in ground-water based source water areas.

Performance Database: The Underground Injection Control (UIC) program is authorized under Part C Sections 1422 -1426 of the Safe Drinking Water Act (SDWA). Regulations for the UIC program are in 40 CFR Parts 144 - 148. Basic program information is collected from states and EPA's regional offices (regions) with direct implementation (DI) responsibilities through the 7520 Federal Reporting forms 1, 2A, 2B, 3 and 4. In July 2005, EPA issued a measures reporting assistance memorandum, "Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures." Starting in FY 2005, including annual updates thereafter, states report to EPA the results of their UIC performance measures. In the initial 2005 reporting, states or the regions, if they have direct implementation of the program, report the following information: (1) The number of Class I, II, III, and V violations and significant violations that have been identified and addressed; (2) the number of Class I, II, III and V inspections; (3) The number of Class I, II and III salt solution mining wells that maintained mechanical integrity; (4) the number of Class V wells in Source Water Protection Areas (SWPAs) with surveys completed; and (5) the number of high priority wells in ground water based SWPAs that are closed or permitted. This information was reported to help determine the impact that the UIC program is having relative to public health protection. It also helps assess the progress being made to protect underground sources of drinking water (USDW).

In FY 2003, EPA maintained pilot state-level summary data for each of these reporting elements in a spreadsheet format. In FY 2005, states and/or regions reported summary measures information through a spreadsheet. In FY 2006, measures data was entered into a web-based reporting form which mirrored the spreadsheet from the previous year. The UIC program will begin collecting program information in a UIC national database in 2007; this system will electronically transfer information from state databases to EPA's national database using EPA's Exchange Network. EPA is currently working with the regions and several states to complete development of the system and to begin populating it.

Data Source: Until the UIC national database is deployed for use, states or DI programs will report to EPA using the UIC Inventory/Performance Activity Measures System. This is a web-base data entry system. Starting in 2007, states and DI programs will transition to the UIC national data system for reporting of UIC data. - See section "New/Improved Data or Systems."

Methods, Assumptions and Suitability: For these measures, the states' reporting of progress is based on EPA's 2005 guidance, "Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures." States will only report state-level summary information, much of which is contained in state databases. State reporting will be based on definitions and procedures found in the guidance. EPA believes that the data will be reliable for use in making management decisions.

QA/QC Procedures: QA/QC procedures include validation of information in states' 7520 reporting forms. Additionally, a series of data checks are built into the web entry system. EPA's regional offices also will work with individual states to verify information. Additional checks are performed by EPA headquarters on randomly selected states.

Data Quality Reviews: EPA's regional offices will conduct data quality reviews of state data using the QA/QC procedures and work with states to resolve data issues. EPA headquarters will communicate any additional concerns that may occur. The national data system includes software to reject erroneous data. As a result, EPA expects the quality of data on the results of the assessments and source water protection activities to improve over time.

Data Limitations: Current reporting only provides summary-level information. There is no standard protocol for EPA to verify and validate this summary data against well-level information contained in state databases. Some of the information used for calculation of the measures has not been collected historically reducing the availability of information, which may cause the data to be incomplete and inconsistent across states.

Error Estimate: There is no basis for making an error estimate for these performance measures given the data limitations of state-level summary reporting described above.

New/Improved Data or Systems: The UIC national data base is being developed though consultation with regions and states. It will give EPA the ability to access the data directly from states through the Exchange Network using the Central Data Exchange (CDX). The data system will not only include the data for the measures but all of the data necessary for EPA to effectively manage the national program.

References:

Guidance, Regulations and Data Forms

- Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures (Reporting Assistance Memo)--7/06/06

- Code of Federal Regulations at 40 CFR Parts 144 through 148

- UIC Inventory/Performance Activity Measures System

- 7520 Federal Reporting Forms (OGWDW Homepage-UIC Program)
  Form 7520-1 (summary of permit and non permit actions taken by state)
  Form 7520-2A (summary of state compliance evaluation actions)
  Form 7520- 2B (summary of significant non-compliance)
  Form 7520-3(mechanical integrity test/remedial actions)
  Form 7520-4 (Quarterly Exceptions List)

Web site addresses

- *Safe Drinking Water Act Amendments of 1996*. P.L. 104-182. (Washington: 6 August 1996). Available on the Internet at: http://www.epa.gov/safewater/sdwa/sdwa.html
- For more detailed information on Underground Injection topics, US EPA Office of Ground Water and Drinking Water/UIC Program. Available on the website: http://www.epa.gov/safewater/uic.html

FY 2009 Performance Measure:

- **Percent of state-monitored shellfish-growing acres impacted by anthropogenic sources that are approved or conditionally approved for use.**

Performance Database: There is no database currently available, although one is under development (see below).[2] To date, data to support this measure have come from surveys of States that are members of the Interstate Shellfish Sanitation Conference (ISSC), conducted by NOAA at 5-year intervals and periodic updates requested from the Interstate Shellfish Sanitation Conference (most recent, 2005 data released in 2006).[3]

Data Source: The ISSC requests the data on approved acreages from shellfish producing states and prepares reports. Survey responses are voluntary.

Methods and Assumptions: The methods used by the state programs to produce the data used by the ISSC are based on the National Shellfish Sanitation Plan and Model Ordinance; the operation of those state programs is overseen by the FDA.[4]

Suitability: As water quality conditions are maintained or improved, "approved" or "conditionally approved" shellfish growing acres impacted by anthropogenic sources should not decrease. This measure is not suitable for annual comparison, but as reports are issued periodically by the ISSC, updates on progress can be provided. There is no other suitable surrogate.

QA/QC Procedures: States are responsible for the internal QA/QC of their data.

Data Quality Reviews: The ISSC reviews the state data during report preparation to ensure completeness and accuracy, and follows up with states where necessary.

Data Limitations: Based on NOAA's previous surveys and the voluntary nature of the information collected, potential data limitations may include incomplete coverage of shellfish growing areas.

Error Estimate: No estimates are available.

New/Improved Data or Systems: The ISSC initiated development of the Shellfish Information Management System (SIMS) in July 2002. The database is being developed and implemented by the National Oceanographic and Atmospheric Administration (NOAA) on behalf of the Interstate Shellfish Sanitation Conference (ISSC), a Cooperative Program chartered by the Food and Drug Administration (FDA). The database will include relevant information that is collected by State Shellfish Control Authorities. Historically, NOAA collected shellfish-growing area data in 5-year intervals, 1985, 1990, and 1995. These data were not stored in a database. Once operational, SIMS will be the first national shellfish growing area database and will include NOAA's 1995[5] and the states' baseline (the ISSC is considering the most appropriate baseline year) and most current year data. State summary information can then be used to track trends relevant to the performance measure, with the 1995 data as against the baseline. The SIMS

database is designed as a real time database. The ISSC plans to request data updates annually, but states may update their data any time. These data may be accessed at any time so timely status reports can be generated.

Currently, no long-term database management plan exists.

References:

1. U.S. Environmental Protection Agency. 2006 - 2011 EPA Strategic Plan. Washington, D.C. Pre-publication Copy, September 29, 2006. http://www.epa.gov/ocfo/plan/plan.htm
2. Kracker, L.M., Comar P.G., Meaburn, G.M., and K Murugesan. 2005. SIMS: A Shellfish Information Management System for Molluscan Shellfish. NOAA Technical Memorandum NOS NCCOS 17. 53 pp.
3. Interstate Shellfish Sanitation Conference. Analysis of Classified Shellfish Waters 1985-2005. Columbia, South Carolina. September 2006. (Amended March 2007) http://www.issc.org
4. U.S. Food and Drug Administration. National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish 2005. Washington D.C. http://www.cfsan.fda.gov/~ear/nss3-toc.html
5. National Oceanic and Atmospheric Administration (NOAA), 1997. The 1995 National Shellfish Register of Classified Growing Waters. Silver Spring, MD: Office of Ocean Resources Conservation and Assessment, Strategic Environmental Assessments Division. 398 pp.

FY 2009 Performance Measure:

- **Percentage of women of child-bearing age having mercury levels in blood above the level of concern identified by the National Health and Nutrition Examination Survey (NHANES).**

Performance Database: There is no publicly accessible database that contains this information. Rather, the information is reported by the Centers for Disease Control and Prevention (CDC) every two years. The latest report is the *Third National Report on Human Exposure to Environmental Chemicals*, which presents findings for the years 2001 and 2002, and was published in 2005. In the report, CDC reported that 5.7% of the women of child-bearing age have mercury blood levels above the level of concern.[1]

Data Source: CDC's National Center for Health Statistics conducts the National Health and Nutrition Examination Survey (NHANES) in which chemicals or their metabolites are measured in blood and urine samples from a random sample of participants. NHANES is a series of surveys designed to collect data on the health and nutritional status of the U.S. population. CDC reports the NHANES results in the *National Report on Human Exposure to Environmental Chemicals*. The *Second National Report on Human Exposure to Environmental Chemicals* was released in 2003 and presented biomonitoring exposure data for 116 environmental chemicals for the civilian, non-institutionalized U.S. population over the 2-year period 1999-2000. The *Third National Report on Human Exposure to Environmental Chemicals* presents similar exposure data for the U.S. population for 148 environmental chemicals over the period 2001-2002. The Third

Report also includes the data from the Second Report. A date for release of the Fourth National Report on Human Exposure to Environmental Chemicals has not been set, but current expectation is that it will be published in summer 2008.

Methods and Assumptions: Biomonitoring measurements for the Report were from samples from participants in NHANES. NHANES collects information about a wide range of health-related behaviors, performs a physical examination and collects samples for laboratory tests. Beginning in 1999, NHANES became a continuous survey, sampling the U.S. population annually and releasing the data in 2-year cycles. The sampling plan follows a complex, stratified, multistage, probability-cluster design to select a representative sample of the civilian, noninstitutionalized population in the United States. Additional detailed information on the design and conduct of the NHANES survey is available at http://www.cdc.gov/nchs/nhanes.htm. The CDC National Center for Health Statistics (NCHS) provides guidelines for the analysis of NHANES data at http://www.cdc.gov/nchs/data/nhanes/nhanes_general_guidelines_june_04.pdf. Other details about the methodology including statistical methods are reported in the *Third National Report on Human Exposure to Environmental Chemicals*.

Suitability: This indicator was selected because it provides an indication of levels of exposure in the human population to organic mercury where the main source is the consumption of fish and shellfish contaminated with methylmercury. As consumers follow fish consumption advice, changes in mercury in blood levels will decrease. This measure is not suitable for annual comparison but the period reports form NHANES provides a direct measure of mercury in blood levels in a representative sample of the US population.

QA/QC Procedures: The CDC quality assurance and quality control procedures are not specified in the *Third National Report on Human Exposure to Environmental Chemicals*. However, the Data Sources and Data Analysis chapter in the report does delineate the assumptions inherent in the analysis.

Data Quality Review: The data comes from the NHANES study, which CDC has designed to have a high quality.

Data Limitations: NHANES is designed to provide estimates for the civilian, non-institutionalized U.S. population. The current design does not permit examination of exposure levels by locality, state, or region; seasons of the year; proximity to sources of exposure; or use of particular products. For example, it is not possible to extract a subset of the data and examine levels of blood lead that represent levels in a particular state's population.

Error Estimate: The *Third National Report on Human Exposure to Environmental Chemicals* provides 95% confidence intervals for all statistics. At the point of interest for this measure, the 95% confidence interval is roughly 1.2 ug/l.

New/Improved Data or Systems: None.

References:

1. Centers for Disease Control and Prevention. "Third National Report on Human Exposure to Environmental Chemicals." NCEH Pub. No. 05-0570. Atlanta, GA. July 2005. Available at http://www.cdc.gov/exposurereport/.

FY 2009 Performance Measure:

- **Number of waterborne disease outbreaks attributable to swimming in or other recreational contact with, coastal and Great Lakes waters measured as a five-year average.**

Performance Database: Data on waterborne disease outbreaks (WBDOs) are collected by the states and are submitted to the Centers for Disease Control (CDC) under an agreement with the Council of State and Territorial Epidemiologists, the organization that sponsors the collection of the data. EPA/ORD collaborates with CDC in the analysis of the data. The data are published every two years for the prior second and third years' occurrence of outbreaks as a Surveillance Summary in the CDC's Morbidity and Mortality Weekly Report (MMWR), e.g. data from 1997-1998 were published in 2000. Outbreaks of gastroenteritis, dermatitis, and other diseases are listed according to date of occurrence, state in which the outbreak occurred, etiological agent, the number of cases that resulted from the outbreak, class of the outbreak data (index of data quality for the reporting of the outbreak), and the type of source (e.g., lake, river, pool) involved.

Data Source: Since 1971, CDC and the U.S. Environmental Protection Agency have maintained a collaborative surveillance system for collecting and periodically reporting data that relate to occurrences and causes of WBDOs. The surveillance system includes data about outbreaks associated with drinking water and recreational water. State, territorial, and local public health departments are primarily responsible for detecting and investigating WBDOs and for voluntarily reporting them to CDC.

Methods and Assumptions: State, territorial, and local public health agencies report WBDOs to CDC on a standard form (CDC form 52.12). CDC annually requests reports from state and territorial epidemiologists or from persons designated as WBDO surveillance coordinators. As indicated above, the data are submitted to CDC by the states under an agreement with the Council of State and Territorial Epidemiologists. Original data forms and the primary database itself are not available for external review because of concerns about the integrity and confidentiality of the data, which include information such as the names of data reporters, specific identities of water bodies, and identities of facilities and properties, both public and private, at which the outbreaks occurred. Many, if not most outbreaks occur in treated man-made water environments which are not reflective of outcomes of Clean Water Act programs. Others occur in untreated natural waters in smaller water bodies not impacted by EPA programs or activities. Accordingly, cooperation of database managers is required to identify specific outbreaks which should be counted under this measure as occurring in waters of the United States.

The unit of analysis for the WBDO surveillance system is an outbreak, not an individual case of a waterborne disease, although this information is reported. Two criteria must be met for an event to be defined as a water-associated disease outbreak. First, two or more people must have

experienced a similar illness after exposure to water. This criterion is waived for single cases of laboratory-confirmed primary amebic meningoencephalitis (PAM). WBDOs associated with cruise ships are not summarized in the CDC report.

Suitability: This indicator is suitable as a performance measure because it captures the increased incidence of outbreaks from recreational water contact due to poor water quality conditions. Controlling sources of water contamination would result in maintaining or improving water quality conditions, thereby avoiding an increase in outbreaks

QA/QC Procedures: Data are submitted to CDC on a standard reporting form in hard copy by mail. Procedures for reporting outbreaks on the Internet for web-entry electronic submission are currently under development. Upgrades to the reporting system to incorporate electronic data reporting are anticipated to be implemented within the next three years[1]. Currently, CDC annually obtains reports from state or territorial epidemiologists or persons designated as WBDO surveillance coordinators. Numeric and text data are abstracted from the outbreak form and supporting documents and entered into a database for analysis. Information on QA/QC procedures employed by the individual states or other reporting entities is not included in the CDC reporting.

Data Quality Review: The CDC and EPA/ORD report team review the outbreak reports to ensure the information is complete, following up with the state or local government to obtain additional information where needed. There are currently no external party reviews of this information conducted prior to publication.

WBDOs reported to the surveillance system are classified according to the strength of the evidence implicating water as the vehicle of transmission. The classification scheme (i.e., Classes I--IV) is based on the epidemiologic and water-quality data provided on the outbreak report form. Epidemiologic data are weighted more than water-quality data. Although outbreaks without water-quality data might be included in this summary, reports that lack epidemiologic data were excluded. Single cases of PAM are not classified according to this scheme. Weighting of epidemiologic data does not preclude the relative importance of both types of data. The purpose of the outbreak reporting system is not only to implicate water as the vehicle for the outbreak but also to understand the circumstances that led to the outbreak.

Data Limitations: There are two primary limitations to the CDC WBDO data with respect to this performance measure. The first limitation relates to original data forms and the primary database itself not being available for external review. The implication of this limitation is that database managers or report authors will have to be consulted to identify which of the reported outbreaks have, in fact, occurred in Waters of the United States. The second limitation is the fact that very few outbreaks have been reported over the ten years of data that have been reviewed in consideration of a baseline for this measure.[2-6] The implication of this measure is that were a small number of outbreaks to occur within a given year, it may still be within the range of normal statistical variability and therefore not an effective performance measure.

One key limitation of the data collected as part of the WBDO surveillance system is that the information pertains only to disease outbreaks rather than endemic illness. The epidemiologic

trends and water-quality concerns observed in outbreaks might not necessarily reflect or correspond with trends associated with endemic waterborne illness. To address this problem, EPA and CDC are collaborating on the NEEAR Water Study to assess the magnitude of waterborne illness associated with routine, non-outbreak-associated exposure to marine and freshwater recreational areas.

Error Estimate: The relative quality of data and the error estimate associated with data of a given quality are indicated by the classification of the outbreak report. A classification of I indicates that adequate epidemiologic and water-quality data were reported. Specifically, a classification of I indicates that adequate data were provided about exposed and unexposed persons with a relative risk or odds ratio of =>2 or P value of =<0.05, which indicates statistical significance. Higher classification numbers (II-IV) indicate relatively higher error estimates based on factors such as completeness of data and sample size. For instance, outbreaks that affect fewer persons are more likely to receive a classification of III rather than I because of the relatively limited sample size available for analysis.

New/Improved Performance Data or Systems: The manual reporting of WBDOs has been practiced since the collaborative surveillance system for collecting and reporting data began in 1971. Plans are now in place to transform the outbreak reporting system over the next three years to incorporate electronic data reporting. It is anticipated that the implementation of these upgrades will increase the number of reported outbreaks substantially. An increased number of reported WBDOs resulting from electronic reporting would require the baseline for the performance measure to be reset to a baseline consistent with the new level of reporting in order to yield meaningful trends in the occurrence of waterborne outbreaks in the future.

References

1. U.S. EPA. Office of Research and Development. Personal Communication w/ Calderon RL, author. Washington, DC, December 2005.
2. Yoder JS, Blackburn BG, Craun GF, Hill V, Levy DA, Calderon RL, et al. Surveillance for waterborne-disease outbreaks---United States, 2001--2002. In: CDC Surveillance Summaries, October 22, 2004. MMWR 2004;53(SS-08): 1--22
3. Lee SH, Levy DA, Craun GF, Beach MJ, Calderon RL. Surveillance for waterborne-disease outbreaks---United States, 1999--2000. In: CDC Surveillance Summaries, November 22, 2002. MMWR 2002; 51(SS-8): 1--47.
4. Barwick RS, Levy DA, Craun GF, Beach MJ, Calderon RL. Surveillance for waterborne disease outbreaks---United States, 1997--1998. In: CDC Surveillance Summaries, May 26, 2000. MMWR 2000; 49 (No. SS-4):1--34.
5. Levy DA, Bens MS, Craun GF, Calderon RL, Herwaldt BL. Surveillance for waterborne-disease outbreaks---United States, 1995--1996. In: CDC Surveillance Summaries, December 11, 1998. MMWR 1998; 47(No. SS-5):1--34.
6. Kramer MH, Herwaldt BL, Craun GF, Calderon RL, Juranek DD. Surveillance for waterborne-disease outbreaks---United States, 1993--1994. In: CDC Surveillance Summaries, April 12, 1996. MMWR 1996; 45 (No. SS-1):1--33.

FY 2009 Performance Measure:

- **Percent of days of the beach season that coastal and Great Lakes beaches monitored by state beach safety programs are open and safe for swimming**

Performance Database: The data are stored in PRAWN (Program tracking, beach Advisories, Water quality standards, and Nutrients), a database that includes fields identifying the beaches for which monitoring and notification information are available and the date the advisory or closure was issued, thus enabling trend assessments to be made. The database also identifies those states that have received a BEACH (Beaches Environmental Assessment and Coastal Health) Act [P.L. 106-284] grant. EPA reports the information annually, on a calendar year basis, each May. The calendar year data are then used to support fiscal year commitments (e.g., 2008 calendar year data are used to report against FY 2009 commitments). For the 2006 swimming season, States and Territories monitored for pathogens at 3,771 coastal and Great Lakes beaches. In re-evaluating their beach programs, several states combined small beaches into larger beaches during 2006, reducing the total number of beaches monitored (from 4,025 in 2005 to 3,771 in 2006), but maintaining the scope of their programs. [1]

Data Source: Since 1997 EPA has surveyed state and local governments for information on their monitoring programs and on their advisories or closures. The Agency created the PRAWN database to store this information. State and local governmental response to the survey was voluntary up through calendar year 2002. Starting in calendar year 2003, data for many beaches along the coast and Great Lakes had to be reported to EPA as a condition of grants awarded under the BEACH Act[2]. Since 2005, states have used an on-line process called eBeaches to electronically transmit beach water quality and swimming advisory information to EPA instead of using the paper survey. The latest information reported by a state or local government is accessible to the public through the BEACON (Beach Advisory Closing On-line Notification) system.

Methods and Assumptions: The data are an enumeration of the days of beach-specific advisories or closures issued by the reporting state or local governments during the year. Performance against the target is tracked using a simple count of the number of beaches responding to the survey and the days over which the advisory or closure actions were taken. This is compared to the total number of days that every beach could be open. Thus the data are suitable for the performance measure.

Suitability: This indicator is suitable as a performance measure because it captures the frequency of beach closings primarily due to poor water quality conditions. Controlling sources of contamination would result in water quality improvement at beach thereby leading to fewer closures.

QA/QC Procedures: Since 1997, EPA has distributed a standard survey form, approved by OMB, to coastal and Great Lake state and county environmental and public health beach program officials in hard copy by mail. The form is also available on the Internet for web-entry electronic submission. When a state or local official enters data using the web-entry format, a password is issued to ensure the appropriate party is completing the survey. Currently the Agency has procedures for information collection (see Office of Water's "Quality Management

Plan," approved September 2001 and published July 2002[3]). In addition, coastal and Great Lakes states receiving BEACH Act grants are subject to the Agency's grant regulations under 40 CFR 31.45. These regulations require states and tribes to develop and implement quality assurance practices for the collection of environmental information.

Data Quality Review: EPA reviews the survey responses to ensure the information is complete, following up with the state or local government to obtain additional information where needed. The Agency also reviews the QA/QC reports submitted by States and Territories as part of their grant reporting. There have been no external party reviews of this information.

Data Limitations: From calendar year 1997 to calendar year 2002, participation in the survey and submission of data was voluntary. While the voluntary response rate has been high, it did not capture the complete universe of beaches. The voluntary response rate was 92% in calendar year 2002 (240 out of 261 contacted agencies responded). The number of beaches for which information was collected increased from 1,021 in calendar year 1997 to 2,823 in calendar year 2002. Participation in the survey is now a mandatory condition for implementation grants awarded under the BEACH Act program to coastal and Great Lakes states, with information now available for 3,771 of approximately 6,000 coastal and Great Lakes beaches. All coastal and Great Lakes states and territories utilize the implementation grants.

Error Estimate: Not all coastal and Great Lakes beaches are monitored. In 2006, States and Territories reported that they monitored at 3,771 of the approximately 6,000 coastal and Great Lakes beaches. This monitoring varies between States. For example, North Carolina monitors all its 243 beaches whereas South Carolina monitors 23 of 299 beaches it identified. Where monitoring is done, there is some chance that the monitoring may miss some instances of high pathogen concentrations. EPA's 2002 National Health Protection Survey of Beaches found that 90% of the nation's beaches are monitored once a week or less[4]. Studies in southern California found that weekly sampling missed 75% of the pathogen exceedances[5], and that 70% of the exceedances lasted for only one day.[6] An EPA Office of Research and Development (ORD) beach monitoring study found a positive correlation between pathogen indicator densities one day as compared to densities the next day, but that the correlation was negligible when compared to densities after four days[7]. These studies indicate that weekly sampling most likely misses many pathogen events that can affect public health. This information is not sufficient to calculate the potential error in the reporting, but it is sufficient to indicate that the reporting may understate the number of days that beaches should be closed or under advisory.

New/Improved Data or Systems: Participation in the survey is now a mandatory condition for grants awarded under the BEACH Act program. As the Agency awards these implementation grants, it will require standard program procedures, sampling and assessment methods, and data elements for reporting. The amount, quality, and consistency of available data will improve to the extent that state governments apply for and receive these grants. In FY 2009, EPA expects all 35 coastal and Great Lakes states to again apply for grants to implement monitoring and notification programs.

References:

1. U.S. EPA. Office of Water. "EPA's Beach Report: 2006 Swimming Season." EPA-823-R-

07-005. Washington, DC, May 2007. Available at http://www.epa.gov/waterscience/beaches/seasons/2006
2. U.S. EPA. Office of Water. "National Beach Guidance and Required Performance Criteria for Grants." EPA-823-B-02-004. Washington DC: EPA, June 2002. Available at http://www.epa.gov/waterscience/beaches/guidance/all.pdf
3. U.S. EPA. Office of Water. "A Quality Management Plan." EPA 821-X-02-001. Washington, DC: EPA, July 2002. Available at http://www.epa.gov/water/programs/qmp_july2002.pdf
4. U.S. EPA. Office of Water. "EPA's BEACH Watch Program: 2002 Swimming Season." EPA-823-F-03-007. Washington, DC, May 2003. Available at http://www.epa.gov/waterscience/beaches/beachwatch2003-newformat.pdf
5. Leecaster. M.K. and S.B. Weisberg, Effect of Sampling Frequency on Shoreline Microbiology Assessments, *Marine Pollution Bulletin*, 42(11), 2001.
6. Boehm, A.B., et. al., Decadal and Shorter Period Variability of Surf Zone Water Quality at Huntington Beach, California, *Environmental Science and Technology*, 36(18), 2002.
7. U.S. EPA. Office of Research and Development. "The EMPACT Beaches Project, Results and Recommendations from a Study on Microbiological Monitoring In Recreational Waters." EPA 600/9-02/xxx. Washington, DC, Sept. 2002. (Draft Report).

GOAL 2 OBJECTIVE 2

FY 2009 Performance Measure:

- **Percentage of waters assessed using statistically valid surveys [PART Annual Measure]**

Performance Database: Data generated from the national assessment will be housed in the EPA Office of Water's STORET (STOrage and RETrieval) data warehouse. Prior to entering the STORET warehouse, all datasets are housed in a temporary facility, such as ORD's SWIM database, where they are examined for QA purposes and undergo statistical analysis. Finalized datasets transferred to the STORET warehouse will include all water quality, physical and biological data and associated metadata for each survey. The STORET warehouse is available on the web at http://www.epa.gov/STORET/index.html. Once the data schema for biological and habitat data are developed and deployed for the Exchange Network-based water quality exchange (WQX) warehouse, these data will go directly to the WQX warehouse instead of STORET.

Data Source: Data are collected, processed and analyzed through EPA-State collaboration to assess and report on the condition of the nation's waters with documented confidence. Under this partnership, samples are collected across the country during a specified index period for each resource. Sites are sampled one time, with additional repeat samples collected at 10 percent of the sites to determine precision of methods. Surveys collect a suite of indicators relating to the biological, physical habitat and water quality of the resource in order to assess the resource condition and determine the percentage meeting the goals of the CWA. Surveys will collect information on biological and abiotic factors at 30-50 sites on an ecoregion level II scale for each resource. Prior to sampling, field crews will undergo intensive training by EPA personnel on

field sampling and collection techniques. Laboratory analysis will be conducted at either a state lab or contract lab following specified protocols for the survey. Data collection follows a Quality Assurance Project Plan (QAPP), with subsequent testing and auditing to ensure its application.

Methods, Assumptions and Suitability: The surveys are conducted using a probabilistic survey design, which allows extrapolation of results to the target population (specified water resource, e.g., wadeable streams, lakes, rivers, etc.). The collection design maximizes the spatial spread between sites, located by specific latitude and longitude combinations. The survey utilizes an indexed sampling period to increase the probability of accurately assessing condition and identifying any problems in water quality, physical or biological indices if they exist. Based on the QAPP and field protocol documents, a site is located by the sampling crew via Global Positioning System (GPS). Data are collected for each parameter following the protocols outlined in the field operations manual. Indices for the probabilistic surveys relate to the condition of the resource and the extent that the waters are supporting the fishable and swimmable goals of the Clean Water Act. Samples taken from the field are stored in accordance with field manual instructions and shipped to the processing laboratory. Laboratories will follow quality assurance (QA) plans and complete analysis and provide electronic information to the state or EPA. EPA and the state exchange data to ensure that each has a complete set. EPA and states analyze the data to assess regional and national condition of the water resource surveyed. Results of the analyses on a national and regional basis will be published in a publicly accessible peer reviewed report released within two years of sample collection. The overall change in condition of the water body type will be assessed on a five year cycle.

> *Assumptions*: (1) The underlying target population (water resource sampled for the survey) has been correctly identified; (2) GPS is successful; (3) QAPP and field collection manuals are followed; (4) all samples are successfully collected; (5) all analyses are completed in accordance with the QAPP; and (6) a combination of data into indices is completed in a statistically rigorous manner.
>
> *Suitability:* By design, all data are suitable to be aggregated up to the regional and national level to characterize the ecological condition of the waterbody resource and the associated stressors. Samples provide site specific point-in-time data and excellent representation of the entire resource (extrapolation to the entire resource supportable). Data will be used to characterize populations and subpopulations of waterbody resources through time and space. Data analysis and interpretation will be peer reviewed prior to completion of final report. The data are suitable for individual reports and to establish a baseline for subsequent surveys to evaluate trends.

QA/QC Procedures: Collection and processing of all samples are described in QAPP and Field Protocols documents associated with each survey. In addition, the QAPP will contain specific Data Quality Objectives (DQOs) and Measurement Quality Objectives (MQOs) associated with each survey. To ensure that the survey is obtaining the DQOs and MQOs, there are several QA steps built into each survey. Training for all crew members is required before sampling begins. Field evaluations are conducted for all crews to ensure methods are being followed. Each laboratory involved in the sample processing will adhere to the specified laboratory protocols

and undergo a thorough and documented quality assurance/quality control (QA/QC) process. Submitted data will undergo a final QC check before analysis begins.

Data Quality Reviews: A peer review and public comment period will be held for each survey. During this time, the draft report will be posted on the web for interested parties to review and submit comments. An independent group of experts will be selected to serve on a peer review panel for the report. In house audits will also be conducted over the course of the survey.

Data Limitations: Because the data are collected in a manner to permit calculations of uncertainty and designed to meet specific Data Quality Objectives (DQOs), the results at the regional level are within about 2-4% of true values dependent upon the specific sample type. Detailed QA/QC checks throughout the survey reduce the data limitations and errors in sampling. The scale of the reporting units is limited by the number of samples taken in a specific region. To make a statistically valid statement about the condition of the resource, sample size should minimally include 30-50 sites per region. Since samples are collected one time at each site per survey, trends analysis will depend on future survey work. Lag time between sample collection and reporting will be between 1-2 years.

Error Estimate: The estimation of condition will vary for the national condition and the regional condition for each survey. The condition estimates are determined from the survey data using cumulative distribution functions and statistically-based uncertainty estimates.

New/Improved Data or Systems: Additional indicators, addressing regional specific needs can be added to the survey over time. QA requirements will be met by all laboratories participating in the surveys. Probabilistic surveys repeated on the same water body type utilizing a similar sample design will show condition trends for the resource on a broad geographic scale.

References:

Olsen, A. R. et al. 1999. *Statistical Issues for Monitoring Ecological and Natural Resources in the United States*. Environmental Monitoring and Assessment 54, 1-45

Stevens Jr., D. L. & Urqhart, N. S. 2000. *Response Designs and Support Regions in Sampling Continuous Domains.* Environmetrics 11, 11-41

Stevens Jr., D. L. 1997. Variable Density Grid-based Sampling Designs for Continuous Spatial Populations. Environmetrics 8, 167-195

STORET database website. http://www.epa.gov/STORET/index.html.

U.S. Environmental Protection Agency. 2001. *National Coastal Condition Report*. EPA-620/R-01/005

U.S. Environmental Protection Agency. 2004. *National Coastal Condition Report II*. EPA-620/R-03/002

FY 2009 Performance Measures:

- **Number of water body segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained [PART Long-term and Annual Measure]**
- **Remove the specific causes of waterbody impairment identified by States in 2002**

- **Improve water quality conditions in impaired watersheds nationwide using the watershed approach**
- **Cost per water segment restored [PART Annual efficiency]**

Performance Database: The Watershed Assessment Tracking Environmental Results System (WATERS– found at http://www.epa.gov/waters/) is EPA's approach for viewing water quality information related to these measures. WATERS can be used to view "303(d) Information," compiled from, *States' Listings of Impaired Waters as Required by Clean Water Act Section 303(d)* (referred to here in brief as "303(d) lists"), which are recorded in the National Total Maximum Daily Load (TMDL) Tracking System. This information (found at http://www.epa.gov/owow/tmdl/) is used to generate reports that identify waters that are not meeting water quality standards ("impaired waters") and that need one or more TMDLs to be developed. EPA combined this information with information and comment from EPA Regions and States, on other impaired waters (those for which TMDLs have been completed but are not yet meeting standards) to create the baseline data for these measures. As discussed below under "New and Improved Data Systems," EPA is creating a single database that will track all the impaired waters in the baseline for these measures.

There are several reasons why EPA or states may determine that specific water bodies listed as impaired in 2002, the baseline year, are no longer impaired in the reporting year. For example, water quality might improve due to EPA or state actions to reduce point and nonpoint source discharges of pollutants. In other cases, a state or EPA might conduct more robust monitoring studies and use these data to complete more accurate assessments of water quality conditions. In some cases, a state might modify its water quality standards, in accordance with EPA's regulations, to update scientific criteria or to better reflect the highest attainable conditions for its waters. Each of these examples represents a case where a formerly impaired water no longer may be found to exceed water quality standards. Any such removals of water body impairments will be recorded based on reports from states scheduled every two years through 2012.

EPA's measure that tracks the improvement of water quality conditions utilizes the information on impairments described above and incorporates two additional features: 12-digit hydrologic unit code (HUC) boundaries and data on "watershed-wide water quality improvement." In 2007 (with some most current work in 2008), 12-digit HUC code watersheds will be completed, certified and stored on USDA's comprehensive website for HUC watershed information (see http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/index.html). EPA's $1.1M + investment in boundary delineation and partner investments has ensured that all boundaries needed for EPA strategic plan reporting will be completed prior to reporting deadlines. Data on water quality improvements (e.g., a 20% reduction in nitrogen levels) will be documented via the extensive process laid out in computational guidance for this measure and for the measures on water quality standards and waterbody impairment (see http://www.epa.gov/water/waterplan/documents/subobjective2_2_1.pdf)

The measure regarding the restoration of primarily NPS-impaired waters is being verified through a laborious and careful process, in which EPA Headquarters staff review and help prepare a detailed 2-page Fact Sheet that includes a description of the impairment and the causes of that impairment; a description of the activities that were undertaken to remove the

impairment; the effect of those activities; and the partners involved in solving the problem. Each of these stories is uploaded to the public web site of www.epa.gov/nps/success, and only after uploaded is it counted towards this measure.

Data Source: The primary data source for these measures is State 303(d) lists of their impaired water bodies needing development of TMDLs and State Integrated Reports covering their required submittals of monitoring information pursuant to section 305(b) of the Clean Water Act. These lists/reports are submitted each biennial reporting cycle. The baseline for this measure is the 2002 list/2002 integrated reports. States prepare lists/reports using actual water quality monitoring data, probability-based monitoring information, and other existing and readily available information and knowledge the state has, in order to make comprehensive determinations addressing the total extent of the state's water body impairments. Once EPA approves a state's 303(d) list, the information is entered into WATERS, as described above. Throughout 2006 and 2007, EPA worked with States that did not submit Integrated Reports in 2002 to supplement their 2002 303(d) lists of impaired waters needing TMDLs with waters that were also impaired in 2002 but were not on 303(d) lists because all needed TMDLs were complete. Thus, EPA now has a more complete list of impaired waters for tracking under these measures.

The efficiency measure for the section 106 grant program is derived by dividing the actual expenditures or President Budget requests for the section 106 grant program, plus State funding matches for these grants (as reported to EPA by the States) by the cumulative number of water body segments restored.

Methods, Assumptions, and Suitability: States employ various analytical methods of data collection, compilation, and reporting including: 1) Direct water samples of chemical, physical, and biological parameters; 2) Predictive models of water quality standards attainment; 3) Probabilistic models of pollutant sources; and 4) Compilation of data from volunteer groups, academic interests and others. EPA-supported models include BASINS, QUAL2E, AQUATOX, and CORMIX. Descriptions of these models and instructions for their use can be found at www.epa.gov/OST/wqm/. The standard operating procedures and deviations from standard methods for data sampling and prediction processes are stored by many States in the STOrage and RETrieval (STORET) database.

States exercise considerable discretion in using monitoring data and other available information to make decisions about which waters meet their designated uses in accordance with state water quality standards. EPA then aggregates State data to generate national performance measures.

Delays are often encountered in state 303d lists and 305b submissions, and in EPA's approval of the 303(d) portion of these biennial submissions. EPA encourages States to effectively assess their waters and make all necessary efforts to ensure the timely submittal of required § 303(d) lists of impaired waters. EPA will work with States to facilitate State submission of accurate, georeferenced, and comprehensive data. Also, EPA is heightening efforts to ensure expeditious review of the 303(d) list submissions with national consistency.

QA/QC Procedures: QA/QC of data provided by States pursuant to individual State 303(d) lists (under CWA Section 303(d)) and/or Integrated 305(b)/303(d) Reports) is dependent on individual state procedures. EPA regional staff interact with the States during the process of approval of the lists and before the information is entered into the database to ensure the integrity of the data, consistent with the Office of Water Quality Management Plan (QMP). EPA requires that each organization prepare a document called a QMP that: documents the organization's quality policy; describes its quality system; and identifies the environmental programs to which the quality system applies (e.g., those programs involved in the collection or use of environmental data).

Data Quality Review: Recent independent reports have cited that weaknesses in monitoring and 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*[3], the March 15, 2000 Government Accounting Office report *Water Quality: Key Decisions Limited by Inconsistent and Incomplete Data*[4], the 2001 National Academy of Sciences Report *Assessing the TMDL Approach to Water Quality Management*[5] and *EPA's Draft Report on the Environment.*[6]

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 National Assessment Database) so that they include documentation of data quality information.

Second, EPA has developed a GIS tool called WATERS that integrates many databases including STORET, the National 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 guidance. The 2006 Integrated Report Guidance (released August 3, 2005 at http://www.epa.gov/owow/tmdl/2006IRG)[7] provides comprehensive direction

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[3] USEPA, National Advisory Council for Environmental Policy and Technology, *Report of the Federal Advisory Committee on the Total Maximum Daily Load Program*. EPA 100-R-09-8006 (1998).

[4] GAO. *Water Quality: Key EPA and State Decisions Limited by Inconsistent and Incomplete Data* (Washington, DC: 2000), RCED-00-54 and *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*, GAO-02-186 (Washington, DC: 2002)

[5] Assessing the TMDL Approach to Water Quality Management. 2001. Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction, Water Science and Technology Board, National Research Council

[6] US EPA, *Draft Report on the Environment 2003*. EPA 260-R-02-006 (2003). Available at http://www.epa.gov/indicators/roe/index.htm (accessed 12 December 2005)

[7] USEPA, Office of Water, *2006 Guidance for Assessment, Listing, and Reporting Requirements Pursuant to Sections, 303(d), 305(b), and 314 of the Clean Water Act* (2005). Available at http://www.epa.gov/owow/tmdl/2006IRG (accessed 12 December 2005)

to states on fulfilling reporting requirements of Clean Water Act sections 305 (b) and 303(d). EPA also issued a 2008 Integrated Report clarification memo (released October 12, 2006; available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html)[8]which includes best practices for timely development/submission of lists and expresses continued commitment to support and populate the Assessment Database (ADB) (State-level system which EPA compiles into the National Assessment Database available via WATERS) and/or compatible data management systems.

Also, the *Consolidated Assessment and Listing Methodology – Toward a Compendium of Best Practices*[9] (released on the Web July 31, 2002 at www.epa.gov/owow/monitoring/calm.html) intended to facilitate increased consistency in monitoring program design and the data and decision criteria used to support water quality assessments.

Fourth, the Office of Water (OW) and EPA's Regional Offices have developed the *Elements of a State Water Monitoring and Assessment Program*, (August 2002).[10] This guidance describes ten elements that each state water quality monitoring program should contain and directs states to develop monitoring strategies that propose time-frames for implementing all ten elements.

In addition, a recent evaluation by the EPA Office of the Inspector General[11] recommended that EPA focus on improving its watershed approach by:

Facilitating stakeholder involvement in this approach,
Better integrating the watershed approach into EPA core programs,
Refining the Agency strategic plan to better evaluate key programs and activities, and
Improving the measurement system by which watershed progress is assessed.

Data Limitations: Data may not precisely represent the extent of impaired waters because states do not employ a monitoring design that monitors all their waters. States, territories and tribes collect data and information on only a portion of their water bodies. States do not use a consistent suite of water quality indicators to assess attainment of 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. These variations in state practices limit how the CWA Sections 305(b) reports and the 303(d) lists provided by states can be used to describe water quality at the national level. There are also differences among sampling techniques, and standards.

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

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[8] USEPA, Office of Water, *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions* (2006). Available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html (accessed 21 December 2006)

[9] U.S. EPA, Office of Water, *Consolidated Assessment and Listing Methodology- Toward a Compendium of Best Practices.* (Washington, DC: 2002) Available at www.epa.gov/owow/monitoring/calm.html (accessed 12 December 2005)

[10] USEPA, Office of Water, *Elements of a State Water Monitoring and Assessment Program*, EPA 841-B-03-003 (Washington, DC: 2003). Available at http://www.epa.gov/owow/monitoirng/repguide.html (accessed 12 December 2005)

[11] USEPA Office of the Inspector General, *Sustained Commitment Needed to Further Advance the Watershed Approach* (2005). Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

aggregating water quality assessments at the national level with known statistical confidence. States, territories, and authorized tribes monitor to identify problems and typically lag times between data collection and reporting can vary by state.

Also, as noted above under Methods, Assumptions and Suitability, States exercise considerable discretion in using monitoring data and other available information to make decisions about which waters meet their designated uses in accordance with state water quality standards. EPA then aggregates these various State decisions to generate national performance measures.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The Office of Water has been working with states to improve the guidance under which 303(d) lists are prepared. EPA issued new listing guidance entitled *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act* during summer 2005. The Guidance is a comprehensive compilation of relevant guidance EPA has issued to date regarding the Integrated Report. There are a few specific changes from the 2004 guidance. For example, the 2006 Integrated Report Guidance provides greater clarity on the content and format of those components of the Integrated Report that are recommended and required under Clean Water Act sections 303(d), 305(b), and 314. The guidance also gives additional clarity and flexibility on reporting alternatives to TMDLs for attaining water quality standards (e.g., utilization of reporting Category 4b).

EPA released *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions* in October 2006 18 months in advance of the April 2008 Integrated Report due date. The primary goal of the 2008 memo is to help achieve 100 percent on-time submittals of the Integrated Reports (all 56 states and territories by April 1, 2008). Timely submittal and EPA review of Integrated Reports is important to demonstrate state and EPA success in accomplishing Strategic Plan goals for restoring and maintaining water quality.

EPA is also combining the National TMDL Tracking System and the National Assessment Database into one integrated system (the Assessment, TMDL Tracking, And ImplementatioN System) that tracks the status of all assessed waters and waterbody impairments, including impaired waterbodies. EPA is also in the process of releasing the Water Quality Exchange (WQX) which provides data warehousing capability to any organization that generates data of documented quality and would like to contribute that data to the national WQX data warehouse so that their data may be used in combination with other sources of data to track improvements in individual watersheds. Currently data providers must transmit data and required documentation through their own Central Data Exchange (CDX) node. In 2008, EPA plans to make a web data entry tool available for users who have not invested in the CDX node.

References:

USEPA, Office of Water. 2006. Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. Available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html,

USEPA, Office of Water. 2005. Draft Handbook for Developing Watershed Plans to Restore and Protect Our Waters. Available at http://www.epa.gov/owow/nps/watershed_handbook/.

USEPA, Office of the Inspector General. 2005. *Sustained Commitment Needed to Further Advance the Watershed Approach*. Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

USEPA, Office of Water. 2005. *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act.* Available at http://www.epa.gov/owow/tmdl/2006IRG.

USEPA, Office of the Chief Financial Officer. 2003. *2003-2008 Strategic Plan: Direction for the Future*. Available at http://www.epa.gov/ocfo/plan/2003sp.pdf.

USEPA. 2003. *Draft Report on the Environment 2003*. EPA 260-R-02-006. Available at http://www.epa.gov/indicators/roe/index.htm.

USEPA, Office of Water. 2003. *Elements of a State Water Monitoring and Assessment Program.* EPA 841-B-03-003. Washington, DC. Available at http://www.epa.gov/owow/monitoring/repguid.html.

USEPA, National Advisory Council for Environmental Policy and Technology. 1998. *Report of the Federal Advisory Committee on the Total Maximum Daily Load Program*. EPA 100-R9-8006.

USEPA. 2002. *Consolidated Assessment and Listing Methodology – Toward a Compendium of Best Practices.* Washington, DC. Available at http://www.epa.gov/owow/monitoring/calm.html.

Government Accountability Office. 2002. *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify its Most Polluted W*aters. GAO-02-186. Washington, DC.

Government Accountability Office. 2000. *Water Quality: Key EPA and State Decisions Limited by Inconsistent and Incomplete Data*. GAO-RCED-00-54. Washington, DC.

National Research Council, Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction. 2001. *Assessing the TMDL Approach to Water Quality Management.* Washington, DC: National Academy Press.

FY 2009 Performance Measures*:*

- **Number of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy (cumulative) [PART annual measure]**
- **Number of TMDLs that are established by States and approved by EPA [State TMDLs] on a schedule consistent with national policy (cumulative) [PART annual measure]**

Note: Because a TMDL is a plan for attaining water quality standards, the terms 'approved' and 'established' refer to the completion of the TMDL itself and not necessarily its implementation.

Performance Database: The Assessment and Total Maximum Daily Load (TMDL) Tracking And ImplementatioN System (ATTAINS) is a database which will capture water quality information related to this measure. This database is an upgrade to the existing National TMDL Tracking System (NTTS). ATTAINS will be an integrated system capable of documenting and managing the connections between state assessment and listing decisions reported under sections 305(b) and 303(d) (i.e., integrated reporting) and completed TMDL information. This system will allow seamless access to all information about assessment decisions and restoration actions across reporting cycles and over time until water quality standards are attained. Watershed Assessment Tracking Environmental Results System (WATERS– found at http://www.epa.gov/waters/) is EPA's approach for viewing water quality information related to these measures. TMDL information (found at http://oaspub.epa.gov/waters/national_rept.control) is used to generate reports that identify waters for which EPA has approved state-submitted TMDLs and for which EPA has established TMDLs. Annual TMDL totals, spanning 1996 to the present, are available from ATTAINS on a fiscal year basis. As TMDLs and other watershed-related activities are developed and implemented, water bodies which were once impaired will meet water quality standards. Thus these TMDL measures are closely tied to the PART measure, "Number of water body segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained." Newly attaining water bodies will be removed from the list of impaired water segments.

Data Source: State-submitted and EPA-approved TMDLs and EPA-established TMDLs are the underlying data for these measures. Electronic and hard copies are made available by states and often linked to EPA Web sites. More specifically, WATERS allows search for TMDL documents at http://www.epa.gov/waters/tmdl/tmdl_document_search.html.

Methods, Assumptions, and Suitability: State and EPA TMDLs are thoroughly and publicly reviewed during their development. Upon approval by EPA, relevant information from each TMDL is entered into the ATTAINS by EPA Regional staff.

QA/QC Procedures: QA/QC of data is provided by EPA Regional staff and through cross-checks of WATERS information regarding impaired water listings, consistent with the Water Quality Management Plan (QMP). EPA requires that organizations prepare a document called a QMP that: documents the organization's quality policy; describes its quality system; and identifies the environmental programs to which the quality system applies (e.g., those programs involved in the collection or use of environmental data).

Data Quality Review: Internal reviews of data quality have revealed some inconsistencies in the methodology of data entry between EPA Regional Offices. In 2005 and 2006, EPA convened a meeting of NTTS users to discuss how to improve the database. As a result, data field definitions were clarified, the users' group was reinstituted, several training sessions were scheduled, and an ATTAINS design team is currently directing the database upgrades. One of the issues raised included the methodology used to count TMDLs. Previous methodology generated a TMDL "count" based on the causes of impairment removed from the 303(d) impaired waters list as well as the TMDL pollutant. EPA proposed to change the counting methodology to directly reflect only the pollutants given allocations in TMDLs. During a recent EPA Office of the Inspector General review they concurred with this recommendation. This proposed change was vetted during the TMDL Program's annual meeting in March 2007 and implemented in August 2007, resulting in a cumulative net reduction of 1,577 TMDLs. Current realization of targets shows the TMDL Program continues to attain PART and Strategic Plan targets despite the adjustment to the counting methodology.

Data Limitations: To meet the increasing need for readily accessible CWA information, EPA is both upgrading the current database and overseeing quality review of existing data. In the process of developing the new database existing data entry requirements and procedures are being reevaluated and communicated with data entry practitioners. Data quality has been improving and will continue to improve during this overhaul.

Error Estimate: No error estimate is currently available for these data.

New/Improved Data Systems: See above.

References:

USEPA, Office of the Inspector General. 2007. *Total Maximum Daily Load Program Needs Better Data and Measures to Demonstrate Environmental Results.* Available at http://www.epa.gov/oig/reports/2007/20070919-2007-P-00036.pdf.

USEPA, Office of the Inspector General. 2005. *Sustained Commitment Needed to Further Advance the Watershed Approach.* Available at http://www.epa.gov/oig/reports/2005/20050921-2005-P-00025.pdf.

National Research Council, Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction. 2001. *Assessing the TMDL Approach to Water Quality Management.* Washington, DC: National Academy Press.

Link to TMDL report data can be found at: http://www.epa.gov/owow/tmdl/

Link to the Watershed Assessment Tracking Environmental Results System (WATERS) can be found at: http://www.epa.gov/waters/tmdl/expert_query.html

FY 2009 Performance Measures:

- **Percentage of major dischargers in Significant Noncompliance at any time during the fiscal year (PART measure)**
- Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards (PART measure)

Performance Databases: The Permit Compliance System, (PCS) tracks permit compliance and enforcement data for sources permitted under the Clean Water Act National Pollutant Discharge Elimination System (NPDES). Data in PCS include major permittee self reported data contained in Discharge Monitoring Reports (DMR), data on permittee compliance status, data on state and EPA inspection and enforcement response.

Data Source: Permittee self reported DMR data are entered into PCS by either state or EPA Regional offices. PCS automatically compares the entered DMR data with the pollutant limit parameters specified in the facility NPDES permit. This automated process identifies those facilities which have emitted effluent in excess of permitted levels. Facilities are designated as being in Significant Noncompliance (SNC) when reported effluent exceedances are 20% or more above permitted levels for toxic pollutants and/or 40% or more above permitted levels of conventional pollutants. PCS contains additional data obtained through reports and on-site inspections, which are used to determine SNC, including: non-effluent limit violations such as unauthorized bypasses, unpermitted discharges, and pass through of pollutants which cause water quality or health problems; permit schedule violations; non-submission of DMRs; submission of DMRs 30 or more days late; and violation of state or federal enforcement orders.

Methods, Assumptions and Suitability: There are established computer algorithms to compare DMR effluent data against permitted effluent levels. The algorithms also calculate the degree of permitted effluent exceedance to determine whether toxic/conventional pollutant SNC thresholds have been reached.

QA/QC Procedures: Quality Assurance/Quality Control procedures [See references] are in place for PCS data entry. State and regional PCS data entry staff are required to take PCS training courses [See references]. Quality Management Plans (QMPs) are prepared for each Office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance (OC) has established extensive processes for ensuring timely input, review and certification of PCS information. OC=s QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008.

Data Quality Review: Information contained in PCS is required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. SNC data in PCS are reviewed quarterly.

Data Limitations: Legal requirements for permittees to self report data on compliance with effluent parameters in permits generally results in consistent data quality and accuracy. EPA monitors and measures the timeliness of DMR submissions and data entry quality. National trends over the past several years show an average of 94% of DMRs is entered timely and complete. Where data entry problems are observed, OECA works directly with regions and states to improve performance, and in limited circumstances has dedicated supplemental grant

resources to help regions and states correct problems. As part of ICIS-NPDES implementation OECA is working to deploy an electronic DMR process to save resources on data entry workload and reduce data input errors.

Error Estimate: Not available

New & Improved Data or Systems: PCS was developed during the 1980s and has undergone periodic revision and upgrade since then. OECA is currently developing a modernized data system to replace PCS, utilizing modern data entry, storage, and analytical approaches. The replacement of PCS with ICIS-NPDES (Integrated Compliance Information System – NPDES), a modernized and user-friendly NPDES data system, began in June 2006 when eleven states began using the system; seven other states will be migrated to the new system in August. During phased implementation of ICIS-NPDES across the states a combination of PCS and ICIS-NPDES will be used to generate SNC data. Once fully implemented, ICIS-NPDES will be the sole source of NPDES SNC data.

References:

PCS information is publicly available at: http://www.epa.gov/compliance/planning/data/water/pcssys.htm

FY 2009 Performance Measures:

- **Percentage of States and Territories that within the preceding three year period submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other sources not considered in the previous standards. [PART measure]**
- **Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA [PART measure]**

Performance Database: The Water Quality Standards Action Tracking Application (WATA), an internal tracking application managed by the Office of Science and Technology described at http://intranet.epa.gov/ost/div/shpd/wata-manual.pdf, is the performance database for these measures. The information in this system provides the baseline and performance data for these measures.

Data Source: The underlying data sources for this measure are submissions from states and territories of water quality standards to EPA pursuant to the Clean Water Act and EPA's water quality standards regulation at 40 CFR Part 131. States and territories are required to review their water quality standards at least once every three years and submit any new or revised water quality standards to EPA for review and approval. Each submission is accompanied by a letter from an appropriate official, and includes a certification by the state or territorial attorney general that the standards were duly adopted pursuant to state or territorial law.

EPA Regional Office staff members compile information from each submission and enter it into the WATA system. The information includes identifying data (name of jurisdiction, date of

submission), data concerning components of the submission, and data concerning EPA's action on the submission. EPA has delegated approval and disapproval decisions to the Regional Administrator; the Regional Administrator may re-delegate the decisions to the appropriate Division Director, but no further. Approval decisions are judicially reviewable, and are accompanied by an appropriate administrative record.

Methods and Assumptions:

The Office of Science and Technology has established computation metrics in the Water Quality Standards Action Tracking Application (WATA) system to produce the baselines and performance data for both measures. These metrics are as follows:

- Percentage of State and Territorial water quality standards submissions (received in the 12 month period ending April 30th of the fiscal year) that are approved by EPA. Partial approvals receive fractional credit.

This metric considers all new or revised submissions from May 1 of the previous year through April 30 of the current year. This reporting period provides regions at least five months to reach and document a valid approval decision. EPA management believes this is an adequate time for processing submissions. A "submission" is determined by the submitting jurisdiction, as described above. The metric then searches for whether the Regional Office has made any approval decision concerning the submission. If EPA approves the submission in full by the end of the reporting period, it will be counted with an approval value of 1. If EPA disapproves all provisions of the standards, it will be counted with an approval value of 0 (zero). In some cases the Regional decision official may decide to approve some portions of the standards provisions, disapprove some portions, or defer actions on some portions. To accommodate these possibilities, and to reflect the complex nature of some submissions, the WATA system allows Regional staff to track portions of a submission as separate parts with weights corresponding to the number of actual provisions involved. When different decisions are reached on different parts or provisions of a submission, the metric calculates a fractional approval value. The fractional approval value is a number between 0 and 1, equal to the number of provisions approved, divided by the total number of provisions in the original submission. For example, if a submission contains 10 provisions and EPA approves 8 and disapproves 2, then the metric would count this as 0.8 submissions. The final performance metric is the sum of full or fractional approval values divided by the total number of submissions during the reporting period.

- Number of States and Territories that within the preceding three year period submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or other sources not considered in the previous standards

This measure utilizes a Regional Office entry in the WATA system which indicates whether a submission or submission part includes one or more new water quality criteria or revised criteria that reflect new scientific information from EPA or other sources not considered in the previous criteria. Biological criteria that are reflected explicitly in designated uses would count under this entry. If a state or territory has not adopted any such criteria, the jurisdiction can nevertheless be

counted under this measure if (a) EPA has issued new or revised water quality criteria, including revisions to the published table of EPA recommended criteria at http://www.epa.gov/waterscience/criteria/wqcriteria.html, but the state has determined through a scientific assessment that such a change is not relevant for its waters, or (b) the jurisdiction could certify to EPA that it has completed a defensible scientific review of the new scientific information EPA has issued and has determined that no changes are needed to their existing water quality criteria. The metric searches for one or more qualifying submissions or submission parts for each jurisdiction during the three-year period ending five months before the end of the reporting period, and that have been approved by EPA by the end of the reporting period. For example, for FY 2009 any qualifying submissions from May 1, 2005, through April 30, 2009, that were approved by September 30, 2009, would enable the jurisdiction to be counted. Note the overlap from one reporting year to the next: a state that last made such a submittal, in, say, February 2005, would be counted in FY 2005, FY 2006, and FY 2007 but not in FY 2008 or FY 2009.

Suitability: These two performance measures provide important information about how well EPA and states/territories are carrying out their respective roles and responsibilities for establishing and approving up-to-date scientifically defensible WQS. The first measure describes how well EPA and states/territories are working together to set revised WQS that EPA can approve in a timely fashion. The second measure provides an indicator of how well states' WQS reflect latest scientific data.

QA/QC Procedures: States and territories conduct QA/QC of water quality standards submissions pursuant to individual state procedures. Because such submissions are subject to judicial review, the attorney general's certification described above provides assurance of the content of each submission. EPA regional staffs provide support to and interact with the jurisdictions as they develop, review, and adopt water quality standards. Each Regional Office provides data quality review of its entries in the WATA system. For example, Regional Offices generally assure that each entry is reviewed by the water quality standards coordinator, usually a senior scientist or environmental protection specialist with extensive experience in water quality standards actions. Data validation algorithms built into each entry screen also help improve data quality. In addition, a sample of entries is spot-checked by Headquarters' Office of Science and Technology staff. The Regions and Headquarters have been able to conduct the data quality reviews fairly easily because the number of submissions has averaged about 50 submissions per year in recent years, well within their available resources to provide adequate review.

Data Quality Review: No external reviews of the data have been conducted.

Data Limitations: Submissions may vary considerably in size and complexity. For example, a submission may include statewide water quality standards revisions, use attainability analyses for specific water bodies, site-specific criteria applicable to specific types of waters, general statewide policies, antidegradation policies or procedures, and variances. Therefore, these measures – the number of submissions approved, and the number of jurisdictions with updated scientific information contained in adopted standards – do not provide an indicator of the scope, geographic coverage, policy importance, or other qualitative aspects of water quality standards. This information would need to be obtained in other ways, such as by reviewing the content of

adopted and approved standards available at http://www.epa.gov/waterscience/standards/wqslibrary/, or contacting the appropriate Regional Office or state/territorial personnel.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The Office of Science and Technology is planning to enhance the existing WATA system to improve its capabilities and data quality.

References:

USEPA. September 13, 2006. *Water Quality Standards Acting Tracking Application: Users Manual.* Available at http://intranet.epa.gov/ost/div/shpd/wata-manual.pdf.

USEPA. 2000. *Water Quality Standards Regulation.* Code of Federal Regulations, 40 CFR part 131. Available at http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr131_05.html.

USEPA. August 1994. *Water Quality Standards Handbook,* 2nd edition. http://www.epa.gov/waterscience/standards/handbook/.

FY 2009 Performance Measure:

- **Estimated annual reduction of nitrogen (millions of pounds), phosphorous (millions of pounds), and sediment (tons) from nonpoint sources to waterbodies. [PART Annual Measure]**

Performance Database: The Section 319 Grants Reporting and Tracking System (GRTS) is used by grant recipients (State agencies) to supply information about State NPS Management Programs and annual Section 319 funded work programs, which include watershed-based BMP implementation projects. GRTS includes information about Best Management Practices (BMPs) implemented under 319-funded watershed projects, and the NPS load reductions achieved as a result of implementation. EPA uses GRTS to compile and report information about state section 319 program projects, including load reductions for nitrogen, phosphorus, and sediment.

State reporting via GRTS in part fulfills requirements of the Clean Water Act (CWA) Sections 319(h)(11) and 319(m)(1); however, GRTS also provides EPA and other stakeholders greater and more efficient access to data, information, and program accomplishments than would otherwise be available. Besides load reduction information, GRTS, in conjunction with WATERS (see below) provides detailed georeferencing (i.e., National Hydrography Dataset – or "NHD"-- reach addresses) for 319-funded projects, project cost information, and a host of other elements.

GRTS is also part of the Watershed Assessment, Tracking, and Environmental Results System (WATERS), which is used to provide water program information and display it spatially using a geographic information system integrated with several existing databases. These databases include the STOrage and RETrieval (STORET) database, the National Assessment Database

(NAD), the TMDL Tracking System (NTTS), the Water Quality Standards Database (WQSDB), and GRTS.

Data Source: States enter load reduction data for individual 319-funded projects into GRTS. Various watershed models are used in the States to estimate the load reductions resulting from implementation of BMPs. Two models used by many states, and directly supported by EPA, are the Spreadsheet Tool for Estimating Pollutant Loads (STEPL) model, and the "Region 5" model. States, at their discretion, may use other models or methods (e.g., AGNPs, SWAT, GWLF, etc), or may use actual water monitoring data to generate estimates of pollutant load reduction resulting from BMP implementation. The load reduction data generated by modeling and/or monitoring efforts are entered by State staff directly into the appropriate GRTS data fields.

Methods, Assumptions and Suitability: States employ two main methods to make pollutant load reduction estimates for the purpose of entering information into GRTS: 1) watershed models to estimate load reductions after watershed project BMPs are implemented, and 2) direct sampling over time of pollutants using targeted site selection. Even direct sampling methods, however, usually involve some type of modeling to separate BMP effects from other variables when determining load reductions.

EPA aggregates the load reduction data entered into GRTS to generate the national load reduction number for each pollutant. With each successive time period – each of which includes load reduction estimates from projects funded under more than one fiscal year grant (since BMPs are still "working" for some time after initial installation) -- the total from the previous period is subtracted from the total of the current time period to get the incremental total. For example, our first report on national load reduction numbers in the PART included projects funded from FY 2002 and most of FY 2003 (FY 2002 was the first grant year for which load reduction information was mandated). For the next report in PART, we totaled load reductions for projects from FY 2002 through 2004, with a smattering of projects for FY 2005 for which information was available in GRTS. The total from the first time around was subtracted from this latter total to give us the increment. This increment is what we reported in OMB's Program Assessment Rating Tool (PART) in November 2005.

This method of determining the increment has been necessary because of the particular structure and previous software used for GRTS, which houses projects by grant year. A project funded in a single grant year is usually implemented over several years. Within a single project form, the load reduction number (or numbers if more than one watershed is being addressed by the project) is updated at least annually, but there is no requirement to keep the "original" load reduction number in the system. Therefore, we did not always have a record of how load reductions have increased over time for a given project; hence, we use the method described above to estimate the national load reduction increment from one time period to the next.

QA/QC Procedures: QA/QC of load reduction estimates generated by states is dependent on individual state procedures, such as state Quality Management Plans (QMPs), which are periodically reviewed and approved by EPA Regions.

EPA provides user support and training to states in the use of the STEPL and Region 5 models. EPA emphasizes that Quality Assurance Project Plans (QAPPs) should be developed (in accordance with EPA approved State QMPs) for watershed projects, especially where water quality models are being used or where monitoring is being conducted. EPA also stresses that site-specific parameters be used whenever possible for input to water quality models, as opposed to default input values provided by some modeling tools.

States have continual access and opportunity to review the information in GRTS to ensure it accurately reflects the data they entered (according to their QA procedures). EPA periodically reviews GRTS and reminds states of the critical importance of their completing mandated data elements in a timely, high-quality manner.

Data Quality Review: Data entered in GRTS are periodically reviewed by EPA Regions and Headquarters. Regional personnel also maintain hardcopies of the states work programs, watershed project implementation plans, and Annual Progress Reports. Verification of data in GRTS can be cross-checked with these documents to ensure quality, consistency, and reliability in progress reporting on an incremental (such as, year-to-year) basis, or to note any problems in data quality in GRTS. EPA frequently reviews various aggregation(s) of all the data in GRTS by our use of "ad-hoc" and standard reports available in the GRTS reporting system.

In the past, Nonpoint Source Program reporting under Section 319 had been identified as an Agency-level weakness under the Federal Managers Financial Integrity Act. The Agency's establishment and subsequent enhancements of GRTS has served to mitigate this problem by requiring states to identify the activities and results of projects funded with Section 319(h). In response to the FMFIA evaluation, EPA has been working with states and other stakeholders to improve data input and quality. We sponsor national GRTS-users group meetings each year. These meetings serve not only to meet the training needs of the user community, but also provide a forum for discussing needed enhancements to GRTS. These enhancements range from better capturing environmental results to improving consistency of data entry to facilitate state-by-state comparisons.

The CWA Sections 319(h)(11) and 319(m)(1) require States to report their Nonpoint Source Management Program (NPSMP) milestones, nonpoint source pollutant load reductions, and water quality improvements. These sections provide the EPA Office of Water (OW) authority to require water quality monitoring and/or modeling, and to require reporting by states to demonstrate their success in reducing nonpoint source pollutant loads and improving water quality. OW has issued several guidance documents designed to improve state NPSMPs, watershed-based projects, and consistency in state progress reporting, including their use of GRTS. In September 2001, EPA issued "Modifications to Nonpoint Source Reporting Requirements for Section 319 Grants." This memorandum outlines the process for reporting in GRTS load reductions for nutrients and sediment (for applicable Section 319(h) funded projects). Our current "National Nonpoint Source Program and Grants Guidelines" (October, 2003) includes sections on all nonpoint source grant reporting requirements, including GRTS reporting. Furthermore, EPA, in consultation with the States, has established the nonpoint source program activity measures (PAMs) -- including nonpoint load reductions -- which are now part of EPA's Strategic Plan and the PART. We have also communicated (e.g., via email) to states further

detailed explanations of the NPS program activity measures, expected reporting sources and dates, and results of our reviews of data input to GRTS by the States.

Data Limitations: State NPSMP work to model (and monitor) watersheds is often not integrated or coordinated with state water quality monitoring and assessment strategies, and therefore use of the data may be rather limited. Load reduction data are typically generated from the use of water quality models, and there is a great deal of uncertainty in model inputs and outputs. States generally do not apply model results to decision–making for implementing and/or revising their NPS Management Programs.

State assessments of load reductions and water quality typically include uncertainties associated with any measuring or modeling tools. Variability in the environment, as well as in state methods and application of tools limit the accuracy of data for describing load reductions and water quality at the project level. Aggregating the load reduction data up to the national measure compounds the level of uncertainty, thereby preventing the Agency from assigning a reasonable numerical confidence level to it.

Error Estimate: No error estimate is available for these data.

New/Improved Data or Systems: GRTS has recently been converted to an Oracle database. Oracle is the standard database used by Federal agencies. Conversion to Oracle will allow GRTS to seamlessly connect with WATERS, as well as facilitate potential linkages to a variety of other databases, models, and watershed planning tools. The Oracle-based GRTS will greatly improve reporting capabilities for all end users, and make it easier to quickly answer questions for stakeholders. Questions which will be easier to answer include, "Where are watershed projects being developed and implemented? Are they concurrent with impaired waters and established TMDLs? Do they pursue actions necessary to reduce pollutant loads and attain water quality standards?"

Oracle provides users the capability of customizing data entry screens to facilitate various reporting needs of the States and EPA. We can customize screens to reflect various programmatic needs of Regional offices and States, such as to view only the mandated elements, or a mix of mandated elements and other Regionally-required data fields.

Training on STEPL and the Region 5 model are ongoing in hopes of minimizing operational mistakes for State staff utilizing one or both of these models to estimate section 319 project load reductions.

References: USEPA. *Nonpoint Source Program and Grants Guidelines for States and Territories.* October 23, 2003 (http://www.epa.gov/OWOW/NPS/cwact.html).

USEPA. *Modifications to Nonpoint Source Reporting Requirements for Section 319 Grants.* September 27, 2001 (http://www.epa.gov/OWOW/NPS/cwact.html).

USEPA. GRTS. Grants Tracking and Reporting System. GRTS Web User Guide, Version 1.6 March 15, 2007.

USEPA. WATERS. Watershed Assessment Tracking and Environmental Results. (http://www.epa.gov/waters/).

USEPA. NHDPlus. National Hydrography Dataset Plus (http://www.horizon-systems.com/nhdplus/).

USEPA. STORET. Storage and Retrieval (http://www.epa.gov/storet/dbtop.html).

USEPA. NAD. National Assessment Database (http://www.epa.gov/waters/305b/).

USEPA. WQSDB. Water Quality Standards Database (http://www.epa.gov/wqsdatabase/).

USEPA. STEPL. Spreadsheet Tool for Estimating Pollutant Load (http://it.tetratech-ffx.com/stepl/).

FY 2009 Performance Measures:

- **Percentage of high priority EPA and State NPDES permits that are reissued on schedule (PART Measure)**
- **Percentage of high priority state NPDES permits reissued on schedule (PART Measure)**

Performance Database:

- U.S. EPA. Permit Compliance System (PCS). [database]. Washington, DC [Office of Enforcement and Compliance Assurance]
- U.S. EPA Integrated Compliance Information System (ICIS-NPDES). [database]. Washington, DC [Office of Enforcement and Compliance Assurance]
- Electronic Permit Issuance Forecasting Tool (E-PIFT) [database]. Washington, DC [Office of Water]
- Priority Permits Data Base. [web-based database]. Washington, DC [Office of Water]

EPA has carried out detailed permit renewal backlog tracking with PCS data since November 1998. The Permit Compliance System (PCS) and the Integrated Compliance Information System (ICIS-NPDES) are used to determine which individual permits are current through date fields for permit issuance and expiration. To supplement the individual permit data from PCS, EPA uses the Electronic Permit Issuance Forecasting Tool (E-PIFT) to track the current or expired status of facilities covered under non-storm water general permits. E-PIFT has been used to track non-storm water general permit facilities since January 2001.

In March 2004 a new priority permit issuance strategy was initiated under the Permitting for Environmental Results (PER) program. The priority permits issuance strategy focuses permitting activities on environmentally and administratively significant expired permits. The Priority Permits Database is a web-based system that tracks the specific permits that each State

and Region has identified as priority. States and Regions enter the permits, and EPA HQ uses PCS/ICIS-NPDES to track permit issuance status of these permits.

Data Source: EPA=s Regional offices and NPDES authorized states enter data into PCS and/or ICIS-NPDES and EPA=s Regional offices are responsible for entering data to the E-PIFT. EPA's Regional offices and States also enter permit identification information into the Priority Permits database.

Methods, Assumptions and Suitability: Annually, Office of Wastewater Management (OWM) provides State and Regional authorities with a list of candidate priority permits, defined as permits that have been expired for two years or more. States and Regions then use several programmatic and environmental criteria to select which of those candidate permits should be prioritized for issuance. They then commit to issue these permits over the next two fiscal years, with the goal of achieving a 95% issuance rate. Regions enter their commitments into the Priority Permits Data Base. Results are confirmed using PCS/ICIS-NPDES reports.

QA/QC Procedures: The PCS and ICIS-NPDES databases are managed by the Office of Enforcement and Compliance Assurance (OECA); E-PIFT and Priority Permits Database are web-based systems that are managed by the Office of Water (OW). EPA Headquarters (HQ) staff in OECA review data submitted by states as part of the QA/QC process. In addition, OW continues to work with States and Regions to improve the quality and completeness of the data. EPA generates state-by-state reports that list PCS/ICIS-NPDES Akey data@ fields, including permit issuance and expiration dates, as well as compliance and enforcement data, and provides these lists to NPDES states and Regions for review and cleanup. EPA also created a spread sheet comparing latitude/longitude (lat/long) data for municipal treatment systems collected by the Clean Water Needs Survey to the lat/long data in PCS. This spread sheet is provided to States and Regions so that, where discrepancies exist between state and PCS/ICIS-NPDES data, EPA and States can make corrections in PCS/ICIS-NPDES. EPA will continue to focus on improving the lat/long data in PCS/ICIS-NPDES, especially at the pipe level.

Additionally, where States maintain Akey@ permit data in separate state-level systems, EPA is providing support to upload these data to PCS.

Data Quality Review: The Office of Inspector General (OIG) has issued several findings regarding poor PCS data quality, and PCS has been listed as an Agency-Level Weakness under the Federal Managers Financial Integrity Act since 1999. This weakness affects EPA=s ability to obtain a true picture of the status of the NPDES program. Fortunately, permit event data such as the permit issuance and expiration data needed for this performance measure are generally better populated than other Akey@ data elements. As noted previously, OW is offering support to States for data upload, data entry, and, if necessary, data compilation to improve data quality. This has resulted in improved tracking of data, particularly industrial permits.

The replacement of PCS with ICIS-NPDES, a modernized and user-friendly NPDES data system, began in June 2006 and nineteen states and several territories have successfully migrated to the new system. Use of ICIS-NPDES should greatly increase state participation and data

quality. Batch states (those states with their own data systems) will not be migrated to ICIS-NPDES until appropriate mechanisms are in place to transfer the data.

Data Limitations: Priority Permits data are verified and reliable. We are aware of data gaps in PCS in general, particularly for minor facilities, and of discrepancies between state databases and PCS; however, EPA=s data clean-up over the past five years has significantly improved data quality. E-PIFT has enabled EPA to report on inventories and status of non-storm water facilities covered by NPDES general permits, but the data are not as comprehensive as those tracked in PCS. In addition, to date, there has been no national-level data system to track permit issuance and expiration status of facilities covered by *stormwater* general permits. In 2007, OWM is planning to improve E-PIFT to enable tracking of stormwater general permits and facilities covered under them.

Error Estimate: We believe that the permit renewal backlog data for major facilities is accurate within 2 percent based on input from EPA=s Regional offices and states through a quarterly independent verification. For minor facilities, however, the confidence interval is less precise and probably overestimates the permit renewal backlog for minor facilities by 5 percent based on anecdotal information from EPA=s Regional offices and states.

New/Improved Data or Systems: EPA headquarters has been providing contractor assistance to improve the data quality in PCS and will continue to do so. The new modernized ICIS-NPDES was rolled out in June 2006, with nineteen states and several territories now using the system. ICIS –NPDES will be easier to use and will improve the quality of data needed to manage the NPDES program.

References:

Information for PCS and ICIS-NPDES is publicly available at:
http://www.epa.gov/compliance/data/systems/modernization/index.html

FY 2009 Performance Measure:

- **Loading (pounds) of pollutants removed per program dollar expended (PART efficiency measure)**

Performance Database: Data for this measure are derived using different methods for industries subject to effluent guidelines, Publicly Owned Treatment Works (POTWs), municipal storm water and construction storm water (industrial storm water is not included nor are reductions from water quality based effluent limits). The values derived from these methods are summed to obtain the total pollutant load reductions achieved under the surface water program.
To calculate the PART efficiency measure, the total cumulative pollutant reductions are divided by the total number of dollars devoted to the EPA Surface Water Program (SWP), grants to States under Clean Water Act (CWA) section 106, plus State 'match' dollars, annually. SWP and CWA Section 106 budget is pulled from EPA's Integrated Financial Management System (IFMS). State 'match' dollars are reported to EPA by States.

Data Sources: For industry sectors subject to **effluent guidelines,** estimated loading reductions are taken from reductions estimated in the Technical Development Document (TDD) when the effluent guideline is developed. The common components for such analyses include wastewater sampling, data collection from the regulated industry, and some amount of estimation or modeling. TDDs are available for: Pulp & Paper, Pharmaceuticals, Landfills, Industrial Waste Combustors, Centralized Waste Treatment, Transportation Equipment Cleaning, Pesticide Manufacturing, Offshore Oil & Gas, Coastal Oil & Gas, Synthetic Based Drilling Fluid, Concentrated Animal Feeding Operations, Meat and Poultry, Metal Products and Machinery, Aquaculture. States and EPA=s Regional offices enter data into PCS and ICIS.

For **Publicly Owned Treatment Works (POTWs)**, trend data is taken from a detailed analysis for BOD and TSS loadings from POTWs in AProgress in Water Quality: An Evaluation of the National Investment in Municipal Wastewater Treatment@, USEPA, June 2000, EPA-832-R-00-008. The report provides flow estimates, loading estimates and a distribution of treatment class for every 2 to 4 years from 1968 through 1996. In addition, the report uses data from the Clean Watershed Needs Survey (CWNS) to provide projections for 2016. EPA has also prepared a A2004 Update to Progress in Water Quality@ that uses data from the 2004 CWNS to provide flow and loading estimates for the year 2000 and projections for 2025. The 2004 CWNS is currently at OMB for clearance.

For **Municipal Stormwater,** estimates were derived from EPA models of the volume of storm water discharged from municipal separate storm sewer systems (MS4s) developed as part of a 1997 EPA draft report. The methodology and results of the 1997 draft report are described in AEconomic Analysis of the Final Phase II Storm Water Rule@, EPA, October 1999.[12]

Estimates of the sediment load present in **Construction Stormwater** is derived using a model developed by the US Army Corps of Engineers. The model uses the construction site version of the Revised Universal Soil Loss Equation (RUSLE). Uncontrolled (i.e. prior to implementation of Best Management Practices (BMPs)) and controlled (i.e. after the implementation of BMPs) sediment loadings were estimated for 15 climatic regions with three site sizes (one, three, and five acres), three soil erodability levels (low, medium, and high), three slopes (3%, 7%, and 12%), and various BMP combinations. The methodology and results are described in "Economic Analysis of the Final Phase II Storm Water Rule."

Combined Sewer Overflow (CSO) loadings are estimated based on data obtained from the Clean Watershed Needs Survey and from the "Report to Congress on the Impacts and Control of Combined Sewer Overflows and Sanitary Sewer Overflows." States and EPA=s Regional offices provide data for the CSO Report to Congress and the Clean Watershed Needs Survey.

Data for the PART denominator, i.e. the total number of dollars devoted to the EPA Surface Water Program (SWP), are assembled and updated as new data becomes available. EPA Surface Water Program funds and CWA Section 106 budget are initially based on the President's Budget until a final budget is adopted; it is then pulled from EPA's Integrated Financial Management

[12] Economic Analysis of the Final Phase II Storm Water Rule, Oct. 1, 1999, US EPA. Available at: http://www.epa.gov/npdes or http://cfpub.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name

System (IFMS). State 'match' dollars are reported to EPA by States; where updated data is not available, the last year of confirmed data is carried forward.

Methods, Assumptions and Suitability: EPA uses the spreadsheet described above to estimate loadings. The data are aggregated across different sources to determine loading reductions at the national level. Loadings appear to be the best surrogate for determining the environmental impacts of point sources. Pollutant load reductions, along with some of the water quality improvement measures, tell the story about environmental outcomes. Pollutant reductions per dollar spent provides a snapshot of the effectiveness and efficiency of the surface water program, and comparing this over time helps to delineate a trend.

QA/QC Procedures: The loadings spreadsheets are based on information from rulemakings and policies that have undergone extensive review. The effluent guidelines follow EPA quality assurance/quality control (QA/QC) procedures.

Data Quality Reviews: The methodology for this measure was submitted to OMB for review during the PART process.

Data Limitations: Loadings data must be modeled rather than measured as there is inconsistent and poor data quality in the PCS data base with respect to flow and discharge monitoring, including missing data for minor facilities which has not been required to be entered. Neither monitoring nor flow data are required for certain categories of general permits. The Agency, therefore, is not able to measure actual loadings reductions for all of the approximately 550,000 facilities that fall under the NPDES program. As a result, loadings estimates are based upon models.

When the ICIS-NPDES Policy Statement is issued, the quality and quantity of Discharge Monitoring Report (DMR) data is expected to improve. This will enable development of improved methods for estimating and validating loading reductions.

Error Estimate: At this time we are unable to estimate error due to the lack of actual national level data to compare to estimates based on models.

New/Improved Data or Systems: EPA continues to evaluate and explore improved methods for calculating loadings reductions nation-wide from all sources.

References:

Clean Watershed Needs Survey 2000 [Electronic data base]. (2000). Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management].

Effluent guidelines development documents are available at: http://www.epa.gov/waterscience/guide.

Modeling databases and software being used by the Office of Water are available at: http://www.epa.gov/water/soft.html

SWP PART Efficiency Measure Spreadsheet [Excel Spreadsheet]. Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management].

FY 2009 Performance Measure:

- **Fund utilization rate for the CWSRF [PART annual measure]**

Performance Database: Clean Water State Revolving Fund National Information Management System (NIMS.)

Data Sources: Data are from reporting by municipal and other facility operators, state regulatory agency personnel and by EPA's regional staff. Data are collected and reported once yearly.

Methods, Assumptions and Suitability: Data entered into NIMS are the units of performance. These data are suitable for year-to-year comparison and trend indication.

QA/QC Procedures: EPA's headquarters and regional offices are responsible for compiling the data and querying states as needed to assure data validity and conformance with expected trends. States receive data entry guidance from EPA headquarters in the form of annual memoranda. A generic memorandum would be titled: "Request for Annual Update of Data for the Clean Water State Revolving Fund National Information Management System, July 1, 200X through June 30, 200X."

Data Quality Reviews: EPA's headquarters and regional offices annually review the data submitted by the states. These state data are publicly available at http://www.epa.gov/owm/cwfinance/cwsrf in individual state reports. EPA's headquarters addresses significant data variability issues directly with states or through the appropriate EPA regional office. An annual EPA headquarters' "N IMS Analysis" provides detailed data categorization and comparison. This analysis is used during annual EPA regional office and state reviews to identify potential problems which might affect the performance measure, biennial reviews by EPA's headquarters of regional oversight of state revolving funds and, annual reviews by EPA's regional offices of their states' revolving funds operations.

State data quality is also evaluated during annual audits performed by independent auditors or by the appropriate regional office of the EPA Inspector General. These audits are incorporated into EPA headquarters' financial management system.

Data Limitations: There are no known limitations in the performance data, which states submit voluntarily. Erroneous data can be introduced into the NIMS database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields have been virtually eliminated in the past two years as a result of EPA headquarters' clarification of definitions. These definitions are publicly available at: http://www.epa.gov/owm/cwfinance/cwsrf. There is typically a lag of approximately two months

from the date EPA asks states to enter their data into the NIMS database, and when the data are quality-checked and available for public use.

Error Estimate: Due to the rapid growth of this program, past estimates of annual performance (relative to a target), compared to actual performance data received two years later, have been accurate to an average of approximately plus or minus2 percentage points.

New/Improved Data or Systems: This system has been operative since 1996. It is updated annually, and data fields are changed or added as needed.

References:
State performance data as shown in NIMS are available by state at:
http://www.epa.gov/owm/cwfinance/cwsrf
Definitions of data requested for each data field in NIMS is available at:
http://www.epa.gov/owm/cwfinance/cwsrf
The Office of Water Quality Management Plan, July 2001 (approved September 28, 2001) addresses the quality of data in NIMS. Not publicly available.

FY 2009 Performance Measures:

- Number of waterbodies restored or improved per million dollars of CWSRF assistance provided. (PART efficiency measure)
- Number of waterbodies protected per million dollars of CWSRF assistance provided. (PART efficiency measure)

Performance Databases: Clean Water State Revolving Fund Benefits Reporting (CBR) Database

CBR contains state-by-state data on the environmental benefits achieved by each loan made by the 51 state CWSRFs. CBR is a new database and therefore does not contain data on all CWSRF loans since the inception of the program. CBR contains complete data on all loans made from capitalization grants received after January 1, 2005. Some states have chosen to report the environmental benefits of loans made from earlier capitalization grants. Data is entered into CBR by states on a rolling basis; however, states must enter all loans for a given fiscal year by the end of the state fiscal year. As of July 2007, the environmental benefits of $13.4 billion in CWSRF assistance had been reported in the CBR.

CBR contains general information about each loan, including borrower, loan execution date, loan amount, repayment period and interest rate. Data on the environmental benefits of each loan include population served, wastewater volume, needs categories addressed, discharge information (i.e. ocean, surface water, groundwater, etc), permit type/number (if applicable), affected waterbody name and ID number, and affected waterbody status (impaired or meeting standards). CBR also collects information on whether each loan helps a system to achieve or maintain compliance, and whether it contributes to water quality improvement or maintenance. The designated uses of the waterbody are identified, as well as whether the loan contributes to protection or restoration of each designated use.

Data Sources: State regulatory agency personnel report and enter data into the CBR database on a rolling basis, based on state fiscal year.

Methods, Assumptions and Suitability: Data entered into CBR directly represent the units of performance for the performance measure. Data collected in the CBR database is suitable for calculating these performance and efficiency measures.

QA/QC Procedures: EPA regional offices are responsible for assuring state personnel enter all data by the end of the state fiscal year. States receive data entry guidance from EPA headquarters in the form of data definitions, available online at: http://12.170.50.10/cwbenefits/login.aspx by clicking on the "help" menu in the top right corner of the screen.

Data Quality Review: Quarterly checks of the data are performed by EPA's contractor to ensure that states are entering data in a manner consistent with data definitions. Headquarters addresses significant data variability issues directly with states.

Data Limitations: Erroneous data can be introduced into the CBR database by typographic or definitional error. Typographic errors are controlled and corrected through data testing performed by EPA's contractor. Definitional errors due to varying interpretations of information requested for specific data fields are minimized as a result of EPA headquarters' clarification of definitions. Data is entered into the system on a rolling basis due to variations in state fiscal years. This new database has been in operation for approximately one year. As a result, comprehensive data is not available for all states for years prior to 2005.

Error Estimate: As this is a new database, an error estimate is not available at this time.

New & Improved Data or Systems: This system has been operative since 2005. Data fields are changed or added as needed.

References:
Definitions of data requested for each data field in the CBR database are available at: http://12.170.50.10/cwbenefits/login.aspx by clicking on the "help" menu in the top right corner of the screen.

FY 2009 Performance Measures:

- Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal. [PART annual measure]
- Number of homes that received improved service per $1,000,000 of State and Federal funding. [PART efficiency measure]

Performance Database: Sanitation Tracking and Reporting System (STARS), managed by the Indian Health Service (IHS), Office of Environmental Health and Engineering (OEHE), Division of Sanitation Facilities Construction (DSFC). This database has been modified

to include information on water and wastewater projects in rural Alaska communities and Alaska Native Villages (ANVs).

Data Sources: The STARS includes data on sanitation deficiencies, Indian homes and construction projects. STARS is currently comprised of two sub-data systems, the Sanitation Deficiency System (SDS) and the Project Data System (PDS).

Methods, Assumptions and Sustainability: The SDS is an inventory of sanitation deficiencies for Indian and rural Alaska homes, ANVs and communities. It is updated annually. The identification of sanitation deficiencies can be made several ways, the most common of which follow:

- Consultation with Tribal members, community members and other Agencies
- Field visits by engineers, sanitarians, Community Health Representatives (CHRs) nurses, State of Alaska IHS or tribal heath staff
- PWSS Sanitary Surveys
- Tribal Master Plans for Development
- Telephone Surveys
- Feasibility Studies

The most reliable and preferred method is a field visit to each community to identify and obtain accurate numbers of homes with sanitation deficiencies. The number of Indian homes within the communities must be consistent among the various methods cited above. If a field visit cannot be made, it is highly recommended that more than one method be used to determine sanitation deficiencies to increase the accuracy and establish greater credibility for the data.

The PDS is a listing of funded construction projects and is used as a management and reporting tool. The PDS supports the annual calculation of the program efficiency measure.

QA/QC Procedures: Quality assurance for the Indian country water quality performance measure depends on the quality of the data in the STARS. The STARS data undergo a series of quality control reviews at various levels within the IHS and the State of Alaska.

Data Quality Reviews: The SDS data undergo a series of highly organized reviews by experienced tribal, IHS field, IHS district, State of Alaska and IHS area personnel. The data quality review consists of performing a number of established data queries and reports, which identify errors and/or inconsistencies. In addition, the top SDS projects and corresponding community deficiency profiles for each area are reviewed against their budgets. Detailed cost estimates are required for the review.

Data Limitations: The data are limited by the accuracy of reported data in STARS.

Error Estimate: The higher-level projects (those with the possibility of funding prior to the next update) must be developed to allow for program implementation in an organized, effective and efficient manner. Those SDS projects (top 20%) must have cost estimates within 10% of the actual costs.

New/Improved Data or Systems: The STARS is a web-based application and therefore allows data to be continuously updated by personnel at various levels and modified as program requirements are identified. PDS has been modified to meet 40CFR31.40 reporting requirements. In 2007 the STARS application will be modified so that STARS' administrators can allow specific users to access their relevant portions of the STARS database.

References:

1. Indian Health Service (IHS), Division of Sanitation Facilities (DSFC). Criteria for the Sanitation Facilities Construction Program, June 1999, Version 1.02, 3/13/2003. http://www.dsfc.ihs.gov/Documents/Criteria_March_2003.cfm

2. Indian Health Service (IHS), Division of Sanitation Facilities (DSFC). Sanitation Deficiency System (SDS), Working Draft, "Guide for Reporting Sanitation Deficiencies for Indian Homes and Communities", May 2003. http://www.dsfc.ihs.gov/Documents/SDSWorkingDraft2003.pdf

FY 2009 Performance Measure:

- **Percent of active dredged material ocean dumping sites achieving environmentally acceptable conditions (as reflected in each site's Site Management Plan)**

Performance Database: Data for this measure are entered into EPA's Annual Commitment System (ACS) database by those EPA Regional offices (Regions) responsible for the management and oversight of dredged material ocean dumping sites. This performance measure, which is a target in the 2006-2011 Strategic Plan, will be tracked on an annual basis as a management tool for the ocean dumping program. The baseline year for the measure is 2005.

Data Source: EPA's Regional offices are responsible for data collection and management. Under section 102 of the Marine Protection, Research, and Sanctuaries Act (MPRSA), EPA Regions may designate ocean sites for the disposal of dredged material. The Act requires that each site have a Site Management and Monitoring Plan (SMMP), which includes, but is not limited to, a baseline assessment of the conditions at the site, a program for monitoring the site, and management practices at the site to protect the aquatic environment. Each SMMP is unique to the dump site and is developed in conjunction with all relevant stakeholders. The SMMP generally defines monitoring requirements, the conditions under which a site is deemed to be environmentally acceptable, and triggers for corrective action. Based on the requirements of each SMMP, the responsible Regions may conduct monitoring surveys of the dump sites to determine benthic impacts, spatial distribution of dredged material, characterize physical changes to the seafloor resulting from disposal, pH, turbidity, and other water quality indicators. Utilizing sampling results (as necessary), EPA Regions determine if a site is achieving environmentally acceptable conditions.

Methods, Assumptions and Suitability: As each SMMP defines the required monitoring and environmentally acceptable conditions for an ocean dumping site, any survey/sampling methodologies and assumptions will be site-specific. However, if a Region utilizes EPA's

Ocean Survey Vessel (OSV) *Bold*, established procedures for use of the equipment and handling samples on the OSV *Bold* must be followed. In addition, for each survey the Region is required to submit to Headquarters a survey plan that presents types of sampling techniques, including equipment used, and how data are recorded. These data are highly suitable for tracking the performance of this measure, as they are collected for the specific purpose of determining the environmental conditions of the dredged material ocean dump sites. The periodicity of monitoring is determined by the SMMP, and is suitable for tracking this measure.

QA/QC Procedures: Regions must develop a Quality Assurance Project Plan (QAPP), as prescribed by their regional quality assurance procedures, when collecting data at an ocean dumping site. These QAPPs are also submitted to Headquarters when a Region utilizes the OSV *Bold* for a sampling survey. The QAPP outlines the procedures for collection methods, use of analytical equipment, analytical methods, quality control, and documentation and records.

Data Quality Reviews: Regions must conduct data quality reviews as determined by their quality assurance procedures and included in their QAPPs.

Data Limitations: It is still early to determine the full extent of data limitations.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: Initial reporting in FY 2007 did not indicate that any improvements to the collection and/or evaluation of data to support the measure were needed.

References: The Annual Commitment System is an internal EPA database that is a component of the Agency's Budget Automation System (BAS). EPA's Oceans and Coastal Protection Division has prepared a template for the Regions to use when preparing survey plans. QAPPs for those Regions responsible for ocean dumping sites may be found at the following internet sites:
EPA Region 1 - http://www.epa.gov/ne/lab/qa/pdfs/QAPPProgram.pdf
EPA Region 2 - http://www.epa.gov/region2/qa/documents.htm#qag
EPA Region 3 - http://www.epa.gov/region3/esc/QA/docs_qapp.htm
EPA Region 4 - http://www.epa.gov/region4/sesd/oqa/r4qmp.html
EPA Region 6 - http://www.epa.gov/earth1r6/6pd/qa/qatools.htm
EPA Region 9 - http://www.epa.gov/region9/qa/pdfs/qaprp_guidance3.pdf
EPA Region 10 - http://www.epa.gov/quality/qs-docs/g5-final.pdf

GOAL 2 OBJECTIVE 3

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of Six Year Review decisions (PART Measure)**
- **Percentage of planned outputs delivered in support of Contaminated Candidate List decisions (PART Measure)**

- **Percentage of planned outputs delivered in support of WQRP long-term goal #1: the protection of human health and ecosystems as related to designated uses for aquatic systems and the beneficial use of biosolids long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of WQRP long-term goal #2: diagnostics and forecasting techniques for the protection of human health and ecosystems as related to designated uses for aquatic systems and the beneficial use of biosolids long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the WQRP long-term goal #3: 1) restore impaired aquatic systems, 2) protect unimpaired systems, 3) provide human health risk and treatment process information on the beneficial use of biosolids, and 4) forecast the ecologic, economic, and human health benefits of alternative approaches to attaining water quality standards (PART Measure)**

Performance Database: Integrated Resources Management System (internal database)

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of a program's long-term goals, each program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual milestones and outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Drinking Water Multi-Year Plan, available at: http://epa.gov/osp/myp/dw.pdf (last accessed July 20, 2007).
Water Quality Multi-Year Plan, available at: http://epa.gov/osp/myp/wq.pdf (last accessed July 20, 2007).

Drinking Water Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004371.2005.html (last accessed August 16, 2007)
Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- Peer-reviewed publications over FTE (Efficiency Measure)

Performance Database: No internal tracking system.

Data Source: Data are derived from a self-produced list of program publications and financial records for FTE employees.

Methods, Assumptions and Suitability: The universe of peer-reviewed publications includes 1) journal articles, 2) books and book chapters, and 3) EPA reports, where at least one EPA author is listed or where the publication is the result of an EPA grant. If a publication includes more than one EPA author, that publication is counted only once. Materials submitted for publication but not yet published are not included. FTE are actual program full time equivalents.

QA/QC Procedures: N/A

Data Quality Reviews: All publications included in the data are peer reviewed according to EPA's Peer Review Handbook (3rd Edition).

Data Limitations: FTE data do not include extramurally-funded contributors. Additionally, data do not capture the quality or impact of the research publications. However, long-term performance measures and independent program reviews are used to measure research quality and impact.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: EPA's Peer Review Handbook, available at: http://www.epa.gov/peerreview/pdfs/Peer%20Review%20HandbookMay06.pdf (last accessed on July 20, 2007)
Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART efficiency measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Water Quality Research Program PART Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html
(last accessed August 16, 2007)

GOAL 3 OBJECTIVE 1

FY 2009 Performance Measure:

- **Daily per capita generation of municipal solid waste** [PART performance]

Performance Database: Data are provided by the Department of Commerce. EPA does not maintain a database for this information.

Data Source: The baseline numbers for municipal solid waste (MSW) 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 materials production and consumption data from various industries.

Methods, Assumptions and Suitability: Data on domestic production of materials and products are compiled using published data series. U.S. Department of Commerce sources are used, where available; but in several instances more detailed information on production of goods by end-use is available from trade associations. The goal is to obtain a consistent historical data series for each product and/or material. Data on average product lifetimes are used to adjust the data series. These estimates and calculations result in material-by-material and product-by product estimates of MSW generation, recovery, and discards. To strategically support attainment of the 35% recycling goal, EPA has identified specific components of the MSW stream on which to focus: paper and paperboard, organics (yard and food waste), and packaging and containers. For these targeted efforts EPA will examine data on these waste components.

There are various assumptions factored into the analysis to develop estimates of MSW generation, recovery and discards. Example assumptions (from pages 141-142 of year 2000 "Characterization Report") include: Textiles used as rags are assumed to enter the waste stream the same year the textiles are discarded. Some products (e.g., newspapers and packaging) normally have short lifetimes and products are assumed to be discarded in the year they are produced.

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, "Characterization of Municipal Solid Waste in the United States," is 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.

Data Limitations: 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.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: Because the statistics on MSW generation and recycling are widely reported and accepted by experts, no new efforts to improve the data or the methodology have been identified or are necessary.

References: *Municipal Solid Waste in the United States: 2003 Facts and Figures*, EPA, April 2005 (EPA530-F-05-003), http://www.epa.gov/epaoswer/non-hw/muncpl/msw99.htm

FY 2009 Performance Measure:

- **Pounds of MSW recycled related to EPA recycling efforts over total EPA recycling dollars and FTE [PART efficiency-under development]**

Performance Database: Data are provided by EPA and the Department of Commerce.

Data Source: National estimates for municipal solid waste (MSW) 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 materials production and consumption data from various industries.

Additional Agency performance data include: total pounds recycled in a year attributable to EPA FTE and contract funds as reported in EPA's Annual Commitment System (ACS), recycling achievements in EPA's recycling partnership programs, as well as the total cost to the Agency including annual recycling dollars, and FTE for HQ and the Regions.

Methods, Assumptions and Suitability: Data on domestic production of materials and products are compiled using published data series. U.S. Department of Commerce sources are used, where available; but in several instances more detailed information on production of goods by end-use is available from trade associations. The goal is to obtain a consistent historical data series for each product and/or material. Data on average product lifetimes are used to adjust the data series. These estimates and calculations result in material-by-material and product-by product estimates of MSW generation, recovery, and discards.

EPA's new long-term 2011 measure focuses on the total pounds of recycling that EPA influences in the United States. EPA helps to increase the amount of materials recycled through its educational materials, technical support, direct assistance, and through recycling partnership programs such as WasteWise, GreenScapes and Recycling on the Go. EPA's new long-term measure focuses on the Agency's recycling achievements by attributing a certain percentage of the pounds recycled in its recycling partnership programs to Agency pollution prevention efforts, counting 100% the total pounds recycled through its grants and projects supported by Agency FTE and contract funds as reported in ACS, and adding an additional 10% of the total national pounds recycled as an estimate of EPA's influence on national recycling rate. In addition, the new MSW efficiency measure focuses on EPA costs, both extramural dollars and FTE. By focusing on the Agency's specific contributions to recycling, this will more accurately represent EPA's efficiency.

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, "Characterization of Municipal Solid Waste in the United States," is reviewed by a number of experts for accuracy and soundness.

EPA's budget information and partnership programs data are subject to EPA's QA/QC procedures.

Data Quality Review: The "Characterization of Municipal Solid Waste in the United States" report, including the baseline numbers and annual rates of recycling and per capita municipal solid waste generation, is widely accepted among solid waste experts.

Data Limitations: 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.

In addition, the new measure is contingent upon collection of accurate and up-to-date information from the recycling partnership programs.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: The new long-term measure represents EPA's accomplishments in promoting recycling.

References:

Municipal Solid Waste in the United States: 2003 Facts and Figures, EPA, April 2005 (EPA530-F-05-003), http://www.epa.gov/epaoswer/non-hw/muncpl/msw99.htm.

Waste News, "Municipal Recycling Survey," (available annually).

Cutting the Waste Stream in Half: Community Record-Setters Show How, EPA-530-R-99-013, June 1999.

Evaluation of Diversion and Costs for Select Drop-Off Recycling Programs, EPA-600-R-95-109, June 1995.

Evaluating the Environmental Effectiveness of Recycling in Pittsburgh, Carnegie Mellon University, May 2002.

FY 2009 Performance Measure:

- Number of **hazardous waste facilities with new controls or updated controls.** [PART measure]

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program.

Data Source: Data are mainly entered by the states and can be entered directly into RCRAInfo, although some choose to use a different program and then "translate" the information into RCRAInfo. Supporting documentation and reference materials are maintained in Regional and state files.

Methods, Assumptions and Suitability: RCRAInfo, the national database which supports EPA's RCRA program, contains information on entities (generically referred to as "handlers") engaged in hazardous waste generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRAInfo has several different modules, including status of RCRA facilities in the RCRA permitting universe.

QA/QC Procedures: States and EPA's Regional offices generate the data and manage data quality related to timeliness and accuracy. Within RCRAInfo, the application software contains structural controls that promote the correct entry of the high-priority national components. RCRAInfo documentation, which is available to all users on-line at http://www.epa.gov/rcrainfo/, provides guidance to facilitate the generation and interpretation of data. Even with the increasing emphasis on data quality, with roughly 10,000 units in the baseline (e.g., a facility can have more than one unit), we hear of data problems with some facilities every year, particularly with the older inactive facilities. When we hear of these issues, we work with the EPA Regional offices to see that they get resolved. It may be necessary to make a few adjustments to the permitting baseline as data issues are identified. Determination of whether or not the facility has approved controls in place is based primarily on the legal and operating status codes for each unit. Each year since 1999, in discussions with Regional offices and states, EPA has highlighted the need to keep the data that support the GPRA permitting goal current. RCRAInfo is the sole repository for this information and is a focal point for planning from the local to national level. Accomplishment of updated controls is based on the permit expiration date code. We have discussed the need for correct entry with the Regions.

During 2008, we plan to update the baseline for tracking in FY09 and beyond. The updates are anticipated to be minimal. New reports should be developed in RCRAInfo in FY08 in order to better track FY09 goals.

Note: Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized state personnel. It is not available to the general public because the system contains enforcement sensitive data. The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste sites.

Data Quality Review: The 1995 GAO report *Hazardous Waste: Benefits of EPA's Information System Are Limited* (AIMD-95-167, August 22, 1995, http://www.gao.gov/archive/1995/ai95167.pdf) on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. Recommendations coincide with ongoing internal efforts to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states. RCRAInfo, the current national database has evolved in part as a response to this report.

Data Limitations: The authorized states have ownership of their data and EPA has to rely on them to make changes. The data that determine if a facility has met its permit requirements are prioritized in update efforts. Basic site identification data may become out-of-date because RCRA does not mandate annual or other periodic notification by the regulated entity when site name, ownership and contact information changes. Nevertheless, EPA tracks the facilities by

their IDs and those should not change even during ownership changes. The baselines are composed of facilities that can have multiple units. These units may consolidate, split or undergo other activities that cause the number of units to change. We aim to have static baselines, but there may be occasions where we would need to make minor baseline modifications. The baseline of facilities that are currently tracked for updated controls are intended to apply to the facilities that are "due for permit renewals," but we anticipate that there will be some facilities that cease to be "due for permit renewals" because of a change in facility status.

Error Estimate: N/A. Currently OSW does not collect data on estimated error rates.

New/Improved Data or Systems: 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, and using commercial off-the-shelf software to develop reports from database tables. New reporting capabilities have been added in FY07.

References: RCRAInfo documentation and data (http://www.epa.gov/rcrainfo/). The 1995 GAO report *Hazardous Waste: Benefits of EPA's Information System Are Limited* (AIMD-95-167, August 22, 1995, http://www.gao.gov/archive/1995/ai95167.pdf).

FY 2009 Performance Measures:

- **No more than 10,000 confirmed releases per year**
- **Increase the rate of significant operational compliance by 1% of the previous year's target**
- **Annual confirmed releases per annual underground storage tanks leak prevention cost [PART Efficiency]**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database. States individually maintain records for reporting state program accomplishments.

Data Source: Designated state agencies submit semi-annual progress reports to the EPA Regional offices. For the PART Efficiency Performance Measure, OUST will estimate the value of this efficiency measure based on data that EPA and state agencies currently collect and maintain. The data includes the states' semi-annual activity reports, which track the number of releases confirmed each year and the number of active underground storage tanks; funding for leak prevention and matching expenditure of 25 percent for every dollar of leak prevention funding the states receive; and EPA's prevention program administration costs, such as salary, travel expenses, contracts and working capital funds.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: For the semi-annual activity report data, EPA's Regional offices verify and then forward the data in an Excel spreadsheet to OUST. OUST staff examine the data and resolve any discrepancies with the regional offices. The data are displayed in an Excel spreadsheet on a region-by-region basis, which is a way regional staff can check their data. For the PART Efficiency Measure, FY 2007 was the baseline for implementation and QA/QC procedures are not yet in place.

Data Quality Review: None.

Data Limitations: For the semi-annual activity report, percentages reported are sometimes based on estimates and extrapolations from sample data. Data quality depends on the accuracy and completeness of state records.

Error Estimate: N/A

New/Improved Data or Systems: None.

References: U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf.

FY 2009 Performance Measure:

- Percentage of coal combustion product ash that is used rather than disposed

Performance Database: Data to support this measure are provided by the Department of Energy and American Coal Ash Association (ACAA). EPA collects data on generation of materials (Toxic Release Inventory), but it does not maintain a database for utilization.

Data Source: The ACAA conducts a voluntary survey on coal ash generation and recycling practices of its membership, which comprises approximately 35% of the electricity generating capacity of the United States. The ACAA survey information is compared to the other sources of utilization data, including the Department of Energy's Energy Information Agency (EIA), the Portland Cement Association and other publicly available trade association data. A limited amount of data relevant to recycling has been reported on EIA Form 767, which was discontinued in 2007. These data will likely be collected on a different EIA form in the future.

Methods, Assumptions and Suitability: The CCP recycling rate is defined as the tonnage of coal ash recycled divided by the tonnage of coal ash generated nationally by coal-fired electric utilities. Data on domestic production of materials and products are compiled using published data series. U.S. Department of Energy sources are used, where available; but for specific utilization data more detailed information on the production of CCPs is available from trade associations. The goal is to obtain a consistent historical data series for products and materials. Data on average production as compared to utilization may provide estimates as to the effectiveness of beneficial use outreach.

QA/QC Procedures: Quality assurance and quality control for production numbers reported on EIA 767 are provided by the Department of Energy's internal procedures and systems. Data on utilization are reviewed by CCP industry experts for accuracy.

Data Quality Review: The reporting of utilization data is voluntary and requires extrapolation and integration with several sources of data. TRI data does not track end-use and does not require reporting of materials by their utilization

Data Limitations: Data limitations stem from the fact that the baseline statistics and annual rates of utilization are collected from different sources and are not mandated by statute or regulation. New data sources may be compared to historic data to determine if trends are reasonable and expected.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: New or additional measurement techniques will need to be developed for 2007 data and beyond based on the development of new EIA forms to track generation and recycling.

References: The American Coal Ash Annual Survey is located at http://www.acaa-usa.org/.

FY 2009 Performance Measure:

- Number of facilities with new or updated controls per million dollars of program cost [PART efficiency]

Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program and provides information on facilities under control.

Costs by the permittee are estimated through the annual cost estimates contained in the Information Collection Requests (ICR) supporting statements relevant to the RCRA Base Program. ICRs are contained in the Federal Docket Management System. Base program appropriation information is maintained in the Budget Automation System (BAS).

Data Source: The Office of Solid Waste develops ICRs and ensures they have active ICRs approved by the OMB for all of their RCRA permitting and base program information collection activities. The Budget Automation System (BAS) automates EPA's budget processes, including planning, budgeting, execution, and reporting. Budget data is entered at a general level by offices and regions or by the Office of the Chief Financial Officer (OCFO).

Methods, Assumptions and Suitability:

Numerator – Facilities under control is an outcome based measure as permits or similar mechanisms are not issued until facilities have met standards or permit conditions that are based on human health or environmental standards. Under the corresponding performance measure, 95% of facilities are to be under control by 2008.

Denominator – The denominator is the sum of two costs. The first is permitting costs based on Information Collection Requests for the base RCRA program. The costs will take into account recent rulemakings, including the Burden Reduction Rulemaking (published April 2006), which will impact program expenditures. The costs will also take into account one time costs associated with first year implementation.

The second program cost in the denominator is the input of a three year rolling average appropriation for Environmental Programs and Management (EPM) and State Tribal and Grant (STAG) program. Corrective action programs costs will not be included but will be addressed in a separate efficiency measure. A rolling average of appropriations is more appropriate since some of the facility controls depend upon past resources. Issuance time for a permit, for example, can exceed one year with public hearings and appeals. The cumulative number of facilities with controls in place is appropriate (rather than a single year's increment) because the appropriations are used to maintain facilities that already have controls in place (e.g. inspections and permit renewals) as well as to extend the number of facilities with controls.

QA/QC Procedures: QA/QC of the ICR costs is based on internal and external review of the data**.** BAS data undergoes quality assurance and data quality review through the Chief Financial Officer.

Data Quality Review: None.

Data Limitations: The data sources for the program costs identified in the denominator of the measure include all of the RCRA base program appropriations (e.g. RCRA Subtitle D program implementation) and not just costs for permitting. Accordingly, the measure cannot be compared with other similar government programs.

Error Estimate: N/A. Currently OSW does not collect data on estimated error rates.

New/Improved Data or Systems: No new efforts to improve the data or methodology have been identified

References: Federal Document Management System www.regulations.gov; Budget Automation Management System

FY 2009 Performance Measures:

- Number of tribes covered by an adequate and recently-approved integrated solid waste management plan
- Number of closed, cleaned-up or upgraded open dumps in Indian Country and on other Tribal lands

Performance Database: EPA's regional offices, in collaboration with the Indian Health Service (IHS), report annually the performance data to the WSTARS database.

Data Source: EPA and the Indian Health Service are co-sponsors of the Tribal Solid Waste Management Assistance Project. The formation of this workgroup resulted from the 1998 *Report to Congress* on open dumps on Indian Lands. The Indian Health Service was tasked to identify the high threat sites in need of upgrade or closure, and report the information to the WSTARS Database. The IHS WSTARS data are reported voluntarily by federally recognized tribal members. The member tribal data are extrapolated to generate national estimates, per the request from Congress.

Methods, Assumptions and Suitability: The Tribal Solid Waste Management Assistance Project is a national program that began in 2001 to increase the number of tribes covered by an adequate and recently-approved integrated waste management plan, and to close, clean-up, or upgrade open dumps in Indian country and on other tribal lands.

The latest EPA and IHS annual data show that an annual, incremental rate will allow the tribes to reach the goals established by 2011.

QA/QC Procedures: The IHS WSTARS data are reported voluntarily by federally recognized tribal members. Quality assurance and quality control are provided by internal procedures of the IHS WSTARS reporting process.

Data Quality Review: The data are reviewed by the EPA and IHS for data quality. The data are considered to be accurate on a national scale.

Data Limitations: The WSTARS contains data pertaining to the open dumps and solid waste management plans of the federal recognized tribal members. The WSTARS membership comprises all of the 562 federally recognized tribes of the United States. Because accurate assumptions can be made about the numbers of open dumps and the solid waste management plans generated, the data may be extrapolated to estimate the total open dumps and solid waste management plans for the federally recognized tribes within the United States. The data, however, may be limited in certain regions of the country, making extrapolations to a national statistic inaccurate.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: No new efforts to gather different or additional data are contemplated at this time.

References: The IHS, WSTARS data are available from the HIS website at www.ihs.gov.

GOAL 3 OBJECTIVE 2

FY 2009 Performance Measures:

- **Number of inspections and exercises conducted at oil storage facilities required to have Facility Response Plans**
- Gallons of oil spilled to navigable waters per million program dollars spent annually on prevention and preparedness at FRP facilities [PART efficiency]
- Percentage of inspected facilities subject to SPCC regulations found to be in compliance. [PART performance]
- Percentage of inspected facilities subject to FRP regulations found to be in compliance. [PART performance]

Performance Database: The EPA Annual Commitment System (ACS) in BAS is the database for the number of inspections/exercises at SPCC and FRP facilities. Using data submitted directly by Regional staff as well as data in ACS , Office of Emergency Management (OEM) tracks in a spreadsheet national information about Regional activities at FRP facilities. Data about gallons of oil spilled are maintained in a National Response Center (NRC) database that reflects information reported to the NRC by those responsible for individual oil spills. Prevention and preparedness expenditures are tracked in the Integrated Financial Management System (IFMS), the Agency's financial database.

Data Source: Data concerning inspections/exercises at FRP and SPCC facilities are provided by Regional staff. Data concerning gallons of oil spilled to navigable waters are gathered from the publicly available National Response Center database. Data about program expenditures are extracted by EPA HQ from IFMS.

Methods, Assumptions and Suitability: The spill/exercise data are entered by Regional staff experienced in data entry. In every case, direct data (rather than surrogates open to interpretation) are entered.

QA/QC Procedures: Data are regularly compared to similar data from the past to identify potential errors.

Data Quality Reviews: EPA regularly reviews recent data, comparing them to data gathered in the past at similar times of year and in the same Regions. Any questionable data are verified by direct contact with the Regional staff responsible for providing the data.

Data Limitations: The NRC data will reflect the extent to which those responsible for oil spills accurately report them to the NRC.

Error Estimate: Data reported by the Regions should be relatively free of error. There may be some error in the NRC data, due to the fact that some spills might not be reported and/or some spills might be reported by more than one person. NRC and EPA procedures should identify multiple reports of the same spill, but it is not usually possible to identify an unreported spill.

New/Improved Data or Systems: There are no current plans to develop a dedicated system, to manage the various data.

References: For additional information on the Oil program, see www.epa.gov/oilspill

FY 2009 Performance Measure:

- Score in annual Core Emergency Response assessment

Performance Database: No specific database has been developed. Data from evaluations from each of the 10 Regions are tabulated and stored using standard software (e.g., Word spreadsheets).

Data Source: Data are collected through detailed surveys of all Regional programs, as well as HQ offices and Special Teams of responders; the process includes interviews with personnel and managers in each program office. The score represents a composite based upon data from each unique Regional and headquarters organization. Annual increments represent annual improvements. The survey instrument was developed based upon Core Emergency Response (ER) elements, and has been approved by EPA Headquarters and Regional managers. Core ER elements cover all aspects of the Core ER program, including Regional Response Centers, transportation, coordination with backup Regions, health and safety, delegation and warrant authorities, response readiness, response equipment, identification clothing, training and exercises, and outreach.

While EPA is currently prepared to respond to chemical, biological, and radiological incidents, improvement in the emergency response and homeland security readiness measure will demonstrate an increased ability to respond quickly and effectively to national-scale events. The FY 2009 Core ER target is to improve emergency response and homeland security readiness by 10 points from the FY 2008 performance.

Methods, Assumptions and Suitability: The Core ER elements were developed over the last several years by the EPA Removal Program to identify and clarify what is needed to ensure an excellent emergency response program. The elements, definitions, and rationales were developed by staff and managers and have been presented to the Administrator and other high level Agency managers. Based on the Core ER standards, evaluation forms and criteria were established for EPA's Regional programs, the Environmental Response Team (ERT), and Headquarters. These evaluation criteria identify what data need to be collected, and how that data translate into an appropriate score for each Core ER element. The elements and evaluation criteria will be reviewed each year for relevance to ensure that the programs have the highest standards of excellence and that the measurement clearly reflects the level of readiness. The data are collected from each Regional office, Special Teams, and Headquarters using a systematic, objective process. Each evaluation team consists of managers and staff, from Headquarters and possibly from another EPA Regional office, with some portion of the team involved in all reviews for consistency and some portion varying to ensure independence and objectivity. For instance, a team evaluating Region A might include some or all of the following: a staff person from Headquarters who is participating in all reviews, a staff person from Headquarters who is very familiar with Region A activities, a manager from Headquarters, and a staff person and/or manager from Region B. One staff or group will be responsible for gathering and analyzing all

the data to determine the overall score for each Regional office, Special Teams and Headquarters, and for determining an overall National score.

QA/QC Procedures: See "Methods, Assumptions and Suitability."

Data Quality Review: The evaluation team will review the data (see Methods, Assumptions and Suitability) during the data collection and analysis process. Additional data review will be conducted after the data have been analyzed to ensure that the scores are consistent with the data and program information. There currently is no specific database that has been developed to collect, store, and manage the data.

Data Limitations: One key limitation of the data is the lack of a dedicated database system to collect and manage the data. Standard software packages (word processing, spreadsheets) are used to develop the evaluation criteria, collect the data, and develop the accompanying readiness scores. There is also the possibility of subjective interpretation of data.

Error Estimate: It is likely that the error estimate for this measure will be small for the following reasons: the standards and evaluation criteria have been developed and reviewed extensively by Headquarters and EPA's Regional managers and staff; the data will be collected by a combination of managers and staff to provide consistency across all reviews plus an important element of objectivity in each review; the scores will be developed by a team looking across all ten Regions, Special Teams, and Headquarters; and only twelve sets of data will be collected, allowing for easier cross-checking and ensuring better consistency of data analysis and identification of data quality gaps.

New/Improved Data or Systems: There are no current plans to develop a dedicated system to manage the data.

References: None.

FY 2009 Performance Measures:

- **Number of final Superfund site assessment decisions** [PART performance]
- **Number of Superfund sites with human exposures under control** [PART performance]
- **Number of Superfund sites with contaminated groundwater migration under control** [PART performance]
- **Annual number of Superfund sites with remedy construction completed** [PART performance]
- **Number of Superfund sites that are ready for anticipated use site-wise**
- **Number of Superfund sites with human exposures under control per million dollars obligated [PART efficiency]**
- **Program dollars expended annually per operable unit completing cleanup activities [Federal Facilities PART efficiency measure].**
- **Voluntary removal actions overseen by EPA and completed** [PART performance]
- **Superfund-lead removal actions completed annually** [PART performance]

- **Superfund-lead removal actions completed annually per million dollars** [PART efficiency]
- **Number of Federal Facility Superfund sites where all remedies have completed construction [PART]**
- Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined [PART]

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) is the database used by the Agency to track, store, and report Superfund site information.

Data Source: CERCLIS is an automated EPA system; headquarters and EPA's Regional offices enter data into CERCLIS on a rolling basis. The Integrated Financial Management System (IFMS) is EPA's financial management system and the official system of record for budget and financial data.

Methods and Assumptions: Except for financial information, each performance measure is a specific variable entered into CERCLIS following specific coding guidance and corresponding supporting site-specific documentation.

IFMS contains records of all financial transactions (e.g., personnel, contracts, grants, other) of Superfund appropriation resources, as distinguished by U.S. Treasury schedule codes. Procurement data are entered manually into IFMS by Funds Control Officers throughout the Agency. Site-specific obligations are distinguished through the Site/Project field of the IFMS account number that is assigned to every financial transaction.

Total annual obligations include current and prior year appropriated resources, excluding Office of Inspector General (OIG) and Science and Technology transfers. Site-specific obligation data are derived using query logic that evaluates the Site/Project field of the IFMS account number.

Suitability: The Superfund Remedial Program's performance measures for FY 2009 are the result of several years of refinement with OMB as follow-up to the Program's 2004 PART Review. The measures currently used to demonstrate program progress reflect several major milestones that reflect site cleanup progress from start (final assessment decision) to finish (sites ready for anticipate use). Each measure marks a significant step in ensuring human health and environment protection at Superfund sites. OMB has accepted these measures for monitoring program performance on an annual basis.

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund Program 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, data owners, and data input personnel; 4) Quick Reference Guides (QRG), which are available in the CERCLIS Documents Database and provide detailed instructions on data entry for nearly every module in CERCLIS; 5) Superfund Comprehensive

Accomplishment (SCAP) Reports within CERCLIS, which serve as a means to track, budget, plan, and evaluate progress towards meeting Superfund targets and measures; (6) a historical lockout feature in 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. Specific direction for these controls is contained in the Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009 (http://www.epa.gov/superfund/action/process/spim08.htm).

CERCLIS operation and further development is taking place under the following administrative control quality assurance procedures: 1) Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf); 2) the Office of Superfund Remediation and Technology Innovation Quality Management Plan (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf) 3) Agency platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf); 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS is being developed and maintained (http://www.epa.gov/quality/informationguidelines); and 5) Agency security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView). In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS outputs.

The financial data are compliant with the Federal Managers Financial Integrity Act (FMFIA) of 1982 and received FY 2005 FMFIA certification

Data Quality Reviews: Two audits, one by the Office Inspector General (OIG) and the other by Government Accountability Office (GAO), were conducted to assess the validity of the data in CERCLIS. The OIG audit report, *Superfund Construction Completion Reporting* (No. E1SGF7_05_0102_ 8100030), dated December 30, 1997, 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." Further information on this report is available at http://www.epa.gov/oigearth/eroom.htm. The GAO's report, *Superfund: Information on the Status of Sites* (GAO/RCED-98-241), dated August 28, 1998, was prepared to verify the accuracy of the information in CERCLIS on sites' cleanup progress. The report estimates that the cleanup status of National Priority List (NPL) sites reported by CERCLIS as of September 30, 1997, is accurate for 95 percent of the sites. Additional information on the *Status of Sites* may be obtained at http://www.gao.gov/archive/1998/rc98241.pdf.

Another OIG audit, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002, evaluated the accuracy, completeness, timeliness, and consistency of the data entered into CERCLIS. The report provided 11 recommendations to improve controls for CERCLIS data quality. EPA concurred with the recommendations contained in the audit, and many of the identified problems have been corrected or long-term actions that would address these recommendations continue to be underway. Additional information about this report is available at http://www.epa.gov/oigearth/eroom.htm.

The IG reviews annually the end-of-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) data, in an informal process, to verify the data that supports the performance measures. Typically, there are no published results.

The Quality Management Plan (QMP) for the Office of Solid Waste and Emergency Response (OSWER) was signed in August 2003 (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf).

EPA received an unqualified audit opinion by the OIG for the annual financial statements, and the auditor recommended several corrective actions. All recommendations have been implemented by Office of the Chief Financial Officer in IFMS.

Data Limitations: Weaknesses were identified in the OIG audit, *Information Technology Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002. The Agency disagreed with the study design and report conclusions; however, the report provided 11 recommendations with which EPA concurred and either implemented or continues to implement. These include: 1) FY 02/03 SPIM Chapter 2 update was improved to define the Headquarters' and Regional roles and responsibilities for maintaining planning and accomplishment data in ERCLIS; 2) language was added to the FY 04/05 SPIM Appendix A, Section A.A.5 'Site Status Indicators' to clarify the use of the non-NPL status code of "SX"; 3) a data quality section was added to the FY 04/05 SPIM Appendix A, Section A.A.6 'Data Quality'; 4) FY 04/05 SPIM Appendix E, Section E.A.5 "Data Owners/Sponsorship' was revised to reflect what data quality checks (focus data studies) will be done by designated Regional and headquarters staff; 5) a data quality objectives supplement for GPRA measures was added in Change 6 to the FY04/05 SPIM. For changes implemented due to this OIG audit, see the Change Log for this SPIM at http://www.epa.gov/superfund/action/process/pdfs/changelog6.pdf). The development and implementation of a quality assurance process for CERCLIS data continues. This process includes delineating data quality objectives for GPRA targets, program measures, and regional data. The Agency has begun reporting compliance with the current data quality objectives.

Error Estimate: The GAO's report, *Superfund: Information on the Status of Sites* (GAO/RECD-98-241), dated August 28, 1998, estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95 percent of the sites. The OIG report, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002, states that over 40 percent of CERCLIS data on site actions reviewed was inaccurate or not adequately supported. Although the 11 recommendations were helpful and improved some controls over CERCLIS data, the Agency disagreed and strongly objected to the study design and report conclusions.

New/Improved Data or Systems: As a result of a modernization effort completed in 2004, CERCLIS has standards for data quality and each EPA Region's CERCLIS Data Entry Control Plan, which identifies policies and procedures for data entry, is reviewed annually. EPA Headquarters has developed data quality audit reports and provided these reports to the Regions. These reports document data quality for timeliness, completeness, and accuracy as determined by the Superfund data sponsors to encourage and ensure high quality. Information developed and

gathered in the modernization effort is being used as a valuable resource for scoping the future redesign of CERCLIS. The redesign is necessary to bring CERCLIS into alignment with the Agency's mandated Enterprise Architecture. The first major step in this effort was the migration of all 10 Regional databases and the Headquarters database into one single national database at the National Computing Center in RTP. The Superfund Document Management System (SDMS) has also migrated to RTP to improve efficiency and storage capacity. During this migration the SDMS was linked to CERCLIS which enable users to easily transition between programmatic accomplishments as reported in CERCLIS and the actual document that defines and describes the accomplishments. EPA Headquarters is also evaluating the need and increased functionality of an integrated SDMS-CERCLIS system. Tentatively that system is called the Superfund Enterprise Management System (SEMS). Work on SEMS has started in FY 2007 and will continue through FY 2009.

In an effort to better facilitate and capture important Superfund data, a new Five-Year Review Module was released in CERCLIS in June 2006. In addition, a new Reuse/Acreage Module was released in CERCLIS in June of 2007 to support two new performance measures.

References: OIG audit *Superfund Construction Completion Reporting*, (No. E1SGF7_05_0102_8100030) and *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality*, (No. 2002-P-00016, http://www.epa.gov/oigearth/eroom.htm); and the GAO report, *Superfund Information on the Status of Sites* (GAO/RCED-98-241, http://www.gao.gov/archive/1998/rc98241.pdf). The Superfund Program Implementation Manuals for the fiscal years 1987 to the current manual (http://www.epa.gov/superfund/policy/guidance.htm). The Quality Management Plan (QMP) for the Office of Solid Waste and Emergency Response (August 2003, http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf). Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf). The Office of Superfund Remediation and Technology Innovation Quality Management Plan (http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf). EPA platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf). Quality Assurance Requirements in all contract vehicles under which CERCLIS are being developed and maintained (http://www.epa.gov/quality/informationguidelines). EPA security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView).

FY 2005 FMFIA Certification
2004 Audited Financial Statements, see http://www.epa.gov/oig/reports/financial.htm
OIG Audit "EPA Needs to Improve Change Controls for Integrated Financial Management System" dated August 24, 2004 (2004-P-00026)

All referenced internet addressed were last accessed on 07/31/07.

FY 2009 Performance Measures:

- **Number of RCRA facilities with human exposures to toxins under control.**

- **Number of RCRA facilities with migration of contaminated groundwater under control.**
- Number of RCRA facilities with final remedies constructed.
- **Percent increase of final remedy components constructed at RCRA corrective action facilities per federal, state and private sector costs.** [PART efficiency measure]

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database that supports EPA's RCRA program.

Data Source: The states and Regions enter data. A "High", "Medium", or "Low" entry is made in the database with respect to final assessment decision. A "yes" or "no" entry is made in the database with respect to meeting the human exposures to toxins controlled and releases to groundwater controlled indicators. An entry will be made in the database to indicate the date when a remedy is selected and the complete construction of a remedy is made. Supporting documentation and reference materials are maintained in the Regional and state files. EPA's Regional offices and authorized states enter data on a continual basis. For the efficiency measure, federal and state cost data are assembled from their respective budgets. Private sector costs are derived from data published in the Environmental Business Journal.

Methods, Assumptions and Suitability: 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. Within RCRAInfo, the Corrective Action Module tracks the status of facilities that require, or may require, corrective actions, including information related to the four measures outlined above. Performance measures 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 Corrective Action Program's progress in getting highest-priority contaminated facilities under control. Known and suspected facility-wide conditions are evaluated using a series of simple questions and flow-chart logic to arrive at a reasonable, defensible determination. These questions were issued as a memorandum titled: *Interim Final Guidance for RCRA Corrective Action Environmental Indicators, Office of Solid Waste, February 5, 1999).* Lead regulators for the facility (authorized state or EPA) make the environmental indicator determination, but facilities or their consultants may assist EPA in the evaluation by providing information on the current environmental conditions.

Remedies selected and complete constructions of remedies measure are used to track the RCRA program's progress in getting its highest-priority contaminated facilities moving towards final cleanup. Like with the environmental indicators determination, the lead regulators for the facility select the remedy and determine when the facility has completed construction of that remedy. Construction completions are collected on both an area-wide and site-wide basis for sake of the efficiency measure.

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.

Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized state personnel. It is not available to the general public because the system contains enforcement sensitive data. The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste facilities.

Data Quality Review: GAO's 1995 Report on EPA's Hazardous Waste Information System (http://www.access.gpo.gov/su_docs/fdlp/pubs/study/studyhtm.html) reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. 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. EPA's Quality Staff of the Office of Environmental Information conducted a quality systems audit in December 2003. The audit found the corrective action program satisfactory.

Data Limitations: No data limitations have been identified for the performance measures. As discussed above, the performance measure 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. For the efficiency measure, private sector costs are not publicly available. Estimates of these costs are derived from Environmental Business Journal data.

Error Estimate: N/A. Currently, the Office of Solid Waste does not collect data on estimated error rates.

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 the waste management practices of 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.

References: GAO's 1995 Report on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. This historical document is available on the Government Printing Office Website (http://www.access.gpo.gov/su_docs/fdlp/pubs/study/studyhtm.html).

FY 2009 Performance Measures:

- Number **of cleanups that meet state risk-based standards for human exposure and groundwater migration.** (Tracked as: Number of leaking underground storage tank cleanups completed.) [PART performance]
- Number **of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian country.** (Tracked as: Number of leaking underground storage tank cleanups completed in Indian Country.) [PART performance]
- **Cleanups complete (3-year rolling average) per total cleanup dollars.** (from public and private sector) **[PART efficiency]**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database. States individually maintain records for reporting state program accomplishments.

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

Methods, Assumptions and Suitability: The cumulative number of confirmed releases where cleanup has been initiated and where the state has determined that no further actions are currently necessary to protect human health and the environment, includes sites where post-closure monitoring is not necessary as long as site specific (e.g., risk based) cleanup goals have been met. Site characterization, monitoring plans and site-specific cleanup goals must be established and cleanup goals must be attained for sites being remediated by natural attenuation to be counted in this category. (See http://www.epa.gov/OUST/cat/pm032603.pdf.)

QA/QC Procedures: EPA's regional offices verify and then forward the data in an Excel spreadsheet to OUST. OUST staff examine the data and resolve any discrepancies with the regional offices. The data are displayed in an Excel spreadsheet on a region-by-region basis, which is a way regional staff can check their data.

Data Quality Review: None.

Data Limitations: Data quality depends on the accuracy and completeness of state records.

Error Estimate: N/A

New/Improved Data or Systems: None

References: U.S. Environmental Protection Agency Memorandum, *FY 2007 End-of-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated December 5, 2007, http://www.epa.gov/OUST/cat/ca_07_34.pdf.

GOAL 3 OBJECTIVE 3

FY 2009 Performance Measures:

- **Refer to DOJ, settle, or write off 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**
- **Percentage of Superfund sites at which settlement or enforcement action taken before the start of a Remedial Action (RA)**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation. The database includes sites that are on the National Priorities List (NPL) or being considered for the NPL.

Data Source: Automated EPA system; Headquarters and EPA's Regional Offices enter data into CERCLIS.

Methods, Assumptions and Suitability: There are no analytical or statistical methods used to collect the information. The performance data collected on a fiscal year basis only. Enforcement reports are run at the end of the fiscal year, and the data that support this measure are extracted from the report.

QA/QC Procedures: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved October 2, 2007. To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund Program 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, data owners, and data input personnel; 4) Quick Reference Guides (QRG), which are available in the CERCLIS Documents Database and provide detailed instructions on data entry for nearly every module in CERCLIS; 5) Superfund Comprehensive Accomplishment (SCAP) Reports within CERCLIS, which serve as a means to track, budget, plan, and evaluate progress towards meeting Superfund targets and measures; (6) a historical lockout feature in 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. Specific direction for these controls is contained in the Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009 (http://www.epa.gov/superfund/action/process/spim08.htm).

CERCLIS operation and further development is taking place under the following administrative control quality assurance procedures: 1) Office of Environmental Information Interim Agency Life Cycle Management Policy Agency Directive 2100.5 (http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf); 2) the Office of Superfund Remediation and Technology Innovation Quality Management Plan

(http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf) 3) Agency platform, software and hardware standards (http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf); 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS is being developed and maintained (http://www.epa.gov/quality/informationguidelines); and 5) Agency security procedures (http://basin.rtpnc.epa.gov/ntsd/ITRoadMap.nsf/Security?OpenView). In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS outputs.

Data Quality Review: The IG annually reviews the end-of-year CERCLIS data, in an informal process, to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: None

Error Estimate: NA

New/Improved Data or Systems: None

References: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved October 2, 2007.

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal** (PART Measure)
- **Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal (PART Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of the Land Preservation and Restoration Research Program's long-term goals, the Land program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Contaminated Sites Multi-Year Plan, available at: http://www.epa.gov/osp/myp/csites.pdf (last accessed on July 20, 2007)
Resource Conservation and Recovery Act (RCRA) Multi-Year Plan, available at: http://www.epa.gov/osp/myp/rcra.pdf (last accessed on July 20, 2007)
Land Protection and Restoration Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Average time (in days) for technical support centers to process and respond to requests for technical document review, statistical analysis and evaluation of characterization and treatability study plans.** (Efficiency Measure)

Performance Database: No internal tracking system.

Data Source: Data are generated based on technical support centers' tracking of timeliness in meeting customer needs.

Methods, Assumptions and Suitability: The dates of requests, due dates, response time, and customer outcome feedback are tabulated for the Engineering, Ground Water, and Site Characterization Technical Support Centers.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Land Protection and Restoration Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html (last accessed August 16, 2007)

GOAL 4 OBJECTIVE 1

FY 2009 Performance Measure:

- **Cumulative number of assays that have been validated. (PART Measure)**

Performance Database: Performance is measured by the cumulative number of assays validated. The completion of the validation process for an assay can take several years. Excel spreadsheets are used to capture and track various steps within the validation process in order to better show progress. These steps within the validation process include: detailed review papers completed, prevalidation studies completed, validation by multiple labs completed, peer reviews, and the cumulative number of assays that have been validated.

Data Source: Data are generated to support all stages of validation of endocrine test methods through contracts, grants and interagency agreements, and the cooperative support of the Organization of Economic Cooperation and Development (OECD), and EPA's Office of Research and Development (ORD). The scope of the effort includes the conduct of laboratory studies and associated analyses to validate the assays proposed for the Endocrine Disruptor Screening Program (EDSP). The baseline for this measure is zero assays validated (FY 2005).

Methods, Assumptions and Suitability: The measure is a program output which when finalized, helps to ensure that EPA meets The Food Quality Protection Act of 1996 (FQPA) requirement that EPA validate assays to screen chemicals for their potential to affect the endocrine system. The measure represents the ultimate objective of this program (e.g., validating assays for use in screening and testing chemicals for potential endocrine effects, as required by FQPA.)

QA/QC Procedures: EDSP's contractors operate independent quality assurance units (QAUs) to ensure that all studies are conducted under appropriate QA/QC programs. Two levels of QA/QC are employed. First, the contractors operate under a Quality Management Plan designed to ensure overall quality of performance under the contracts. Second, prevalidation and validation studies are conducted under a project-specific Quality Assurance Project Plans (QAPPs) developed by the contractor and approved by EPA. These QAPPs are specific to the study being conducted. Most validation studies are conducted according to Good Laboratory Practices (GLPs). In addition, EPA or its agent conducts an independent lab/QA audit of facilities participating in the validation program.

Data Quality Review: All of the documentation and data generated by the contractor, OECD and ORD, as it pertains to the EDSP, are reviewed for quality and scientific applicability. The contractor maintains a Data Coordination Center which manages information/data generated under EDSP. The contractor also conducts statistical analyses related to lab studies, chemical repository, and quality control studies.

Data Limitations: There is a data lag of approximately 9-24 months due to the variation in length and complexity of the lab studies, and for time required for review, analysis and reporting of data.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: EPA Website; EPA Annual Report; Endocrine Disruptor Screening Program Proposed Statement of Policy, Dec. 28, 1998; Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) Final Report (EPA/743/R-98/003); EPA Contract # 68-W-01-023.

FY 2009 Performance Measure:

- **Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program. (PART Efficiency Measure)**

Performance Database: EPA will measure the contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program (EDSP) by comparing the cost per study from a previous contract to the cost of a newer multiple awards contract. The newer multiple awards contract involves competition for individual work assignments among two vendors in an effort to provide increased flexibility in both the economic and scientific aspects of the contract. In addition, assays that have now been standardized may be competed on a fixed price, rather than level of effort basis, which will lead to reduced costs for the government.

This efficiency measure must be used in conjunction with the program's annual performance measure (cumulative number of assays validated) to obtain a complete picture of program performance. This is consistent with OMB's direction during the FY06 PART review of EPA's Endocrine Program - to have efficiency measures and annual performance measures, that when taken together, give a full picture of the program.

Data Source: Information will be obtained from contract documents and stored in spreadsheets by OSCP personnel responsible for managing the contracts.

Methods and Assumptions: The baseline average cost per study was calculated based on contract costs from a previous EDSP contract. A laboratory study was defined as conduct of an assay with a single chemical in a single lab, and represents standardized study costs based on a mix of *in vitro* and *in vivo* studies, as well as detail review papers. The baseline average cost per study was $62,175 in 2006. The measure of efficiency will be based on similar data from the newer multiple award contract and judged based on the target of a 1% cost reduction per year for three (3) years.

Suitability: The majority of funds allocated to the EDSP are spent on laboratory studies conducted by contractors. As a result, a measure based on the contract costs is a suitable measure of efficiency for this program.

QA/QC Procedures: Costs for products generated by scientific labs are used for this efficiency measure. OPPT's Office of Science Coordination and Policy (OSCP) maintains spreadsheets to track contract expenditures by study. These spreadsheets are periodically checked against contract records and EPA contracts databases (i.e., Data Financial Warehouse).

Data Quality Review: Data generated from these spreadsheets, for the purposes of this efficiency measure, will be independently reviewed for accuracy before submitting information on this measure.

Data Limitations: In general, there is a data lag of approximately 9-24 months due to the variation in length and complexity of the lab studies, and for time required for review, analysis and reporting of data.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: EPA Website; EPA Annual Report; Endocrine Disruptor Screening Program Proposed Statement of Policy, Dec. 28, 1998; Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) Final Report (EPA/743/R-98/003); EPA Contract # 68-W-01-023.

FY 2009 Performance Measure:

- **Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/reregistered and available for termite treatment (PART measure)**

Performance Database: Baseline data on the number of owner-occupied structures is available from US Census Housing data. Estimates of the extent of termiticide use and termite-related damage are available from several industry and academic sources.

Data Source: Baseline data are derived from several sources, including U.S. Census data, surveys conducted by the pest control industry, and academic publications.

Methods, Assumptions and Suitability: This measure is representative of the explicit statutory mandate of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to ensure the availability of pesticides to permit their societal benefits. An important role of the National Pesticide Program is to prevent harm and preserve a level of public protection.

Pesticides are the primary means to treat or prevent termite infestation. These pesticides are not available for use to treat or prevent this problem unless the National Pesticide Program evaluates their safety and allows them into the marketplace through the Registration or Registration Review programs. Timely and effective licensing actions are required for homeowners to have

access to the benefits of these pesticides and avoid the significant economic loss from termite structural damage.

Termites are one of the most economically important insect pests in the United States. More than 600,000 U.S. homes suffer termite damage every year. Homeowners insurance can help recover losses from fires, storms, and earthquakes, but it is almost impossible to carry insurance against termite infestation and damage. This measure will utilize data that estimate the number of homes that suffer termite-related damage on an annual basis, the value of this damage, the number and frequency of termiticide treatments, and an estimate of the number of treated homes that would have received termite damage absent the use of pesticide control measures.

Through this measure, the Agency will evaluate the extent of termiticide use to protect owner-occupied housing units, average termite damage on a per housing unit basis, and an estimate of the termite structural damage avoided as a result of having safe and effective termite control products available for use.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data used in this measure. Academic research undergoes strict peer-review prior to publication. The Agency will work with non-governmental providers of data to ensure that quality data are used in developing this measure.

Data Quality Reviews: Staff and management of the Office of Pesticide Programs will perform the data quality reviews under the leadership of our QA/QC officers.

Data Limitations: This measure continues to be refined. Currently available data were not collected for performance accountability purposes and may lack precision. Non-pesticide treatment actions may account for some structural damage avoided.

Error Estimate: Error estimates for established surveys are documented by these organizations in their survey reports.

New/Improved Data or Systems: This measure will utilize existing data as well as new data developed from industry and academic research.

References: U.S. Census Bureau data (www.census.gov/compendia/statab/files/house.html); University of Georgia Entomology Dept, (www.ent.uga.edu/IPM/s100/household.htm); National Pest Management Association.
(www.pestworld.org/Database/Article.asp?ArticleID=34&UserType=];
"Arizona Termites of Economic Importance", Better Pest Control, p.11, June 2005, University of Arizona, College of Agriculture and Life Sciences; "Termites: Are They Chewing Up Your Home?", National Pest Management Association; Ipsos-Insight 2005 Survey for Dow Agro (www.dowagro.com/sentricon/termiterisk/facts.htm).

FY 2009 Performance Measure:

- **Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations. (PART measure)**

Performance Database: To determine the value of potential crop loss avoided from the use of pesticides, baseline and future data are collected on crop market prices, crop production, total acres grown, acres treated with pesticides, and the percentage of crop yield loss avoided as a result of the use of pesticides.

Data Source: Baseline data on crop market prices, crop production, and total acres grown are from United States Department of Agriculture (USDA) databases, while the percentage of potential yield loss without pesticides is estimated by Biological and Economic Analysis Division (BEAD) scientists based on published and unpublished studies. The number of acres treated with the pesticides are based on data submitted by State Departments of Agriculture.

Methods, Assumptions and Suitability: The Agency will provide an estimate of the value of the potential crop loss avoided by growers from the use of registered pesticides. The method for estimating this value involves calculating the potential crop loss avoided based on the acres treated with the pesticides, per acre crop production and prices received, and potential yield without the pesticides. In an attempt to measure the magnitude of this potential crop loss avoided, the value is measured as a percent of state production in value and national production in value.

The pesticides selected for this measure will be the registered Section 3 pesticides which were previously Section 18 emergency use registrations. The data used in the analysis of the number of acres treated with the pesticides will be based on USDA databases and data submitted by the State Agricultural Departments. The percentage of potential yield loss without the pesticides will be based on the review of published and unpublished efficacy studies by BEAD scientists.

The United States (U.S.) has a large cropland, productive soils, and a variety of favorable agricultural climates. These factors contribute to and enable the U.S. to be a uniquely large and productive agricultural producer. The value of agricultural crop production in the U.S. totaled $200 billion[13] in 2003. Major field crops in value are corn ($21 billion), soybeans ($15 billion), wheat ($6 billion), and cotton ($3.6 billion), while tomatoes ($1.9 billion), apples ($1.6 billion), and strawberries ($1.2 billion) are major fruit/vegetable crops in value.

American agricultural production far outweighs domestic consumption and the U.S. is one of the World's largest agricultural exporters, worth approximately $50 billion annually (one quarter of total U.S. agricultural crop production). In order to be competitive in the world market and to provide sufficient market supply for American consumers, U.S. farmers need to be able to use pesticides for pest control as long as they do not present significant risks to human health or the environment (USDA/ERS, 2004).

The goal for this measure is to develop long-term consistent and comparable information on the benefits of pesticide usage.

[13] The value received by farmers was $200 billion.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data derived from States, and USDA. The data used for the outcome measure is based on well-established QA/QC procedures found in *Data Quality Assessment: A Reviewer's Guide* (QA/G-9R)[2] (PDF 61pp, 225K), http://www.epa.gov/quality/dqa.html, which provides guidance on assessing data quality criteria and performance specifications.

Data Quality Review: The measure will utilize USDA/NASS methods of collecting and analyzing data.

Data Limitations: This measure is under development. Data limitations will be characterized during developmental stages of the measure and a complete evaluation will be provided in the Agency's annual Performance and Accountability Report.

Error Estimate: USDA provides discussion of analytical methods and associated variability estimates in its chemical use publications. For example, see the Agricultural Chemical Distribution Tables section, Survey and Estimation Procedure section and Reliability section of the USDA publication Agricultural Chemical Usage 2005 Field Crops Summary (http://usda.mannlib.cornell.edu/usda/nass/AgriChemUsFC//2000s/2006/AgriChemUsFC-05-17-2006.pdf).

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References:

USDA data sources include:

United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Chemical Usage.
http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1001

United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Statistics. http://www.usda.gov/nass/pubs/agstats.htm

FY 2009 Performance Measure:

- **Percent of urban watersheds that exceeds the National Pesticide Program aquatic life benchmarks for 3 pesticides of concern. (PART measure)**

Performance Database: Baseline data are obtained from the United States Geological Survey (USGS) National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001 (http://ca.water.usgs.gov/pnsp/). Future data will be compiled from future reports.

Data Source: Baseline data are derived from the USGS National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001. USGS is currently developing sampling plans for 2008 – 2017. Future data will be available from USGS as it is made available on public websites.

Methods, Assumptions and Suitability: Water quality is a critical endpoint for measuring exposure and risk to the environment. It is a high-level measure of our ability to reduce exposure

from key pesticides of concern. This measure evaluates the reduction in water concentrations of pesticides as a means to protect aquatic life. Reduced water column concentration is a major indicator of the efficacy of risk assessment, risk management, risk mitigation and risk communication actions. It will illuminate program progress in meeting the Agency's strategic pesticide and water quality goals.

The goal is to develop long-term consistent and comparable information on the amount of pesticides in streams, ground water, and aquatic ecosystems to support sound management and policy decisions. USGS-NAWQA data can help inform EPA of the long-term results of its risk management decisions based on trends in pesticide concentrations. Recent USGS information indicates exceedences of aquatic life benchmarks in 18 to 40% of the urban and agricultural watersheds sampled. USGS is currently developing sampling plans for 2008 – 2017. Draft plans call for yearly monitoring in 8 agricultural watersheds; bi-yearly sampling in 3 agricultural dominated watersheds; and sampling every four years in a second set of 25 agricultural watersheds. The sampling frequency for these 36 agricultural sites will range from approximately 15 to 35 sites samples per year based on the watershed land use class. The USGS has no plans in this time period for similar sampling in urban watersheds. Intermediate (2008 – 2010) goals will be refined when the USGS plan is finalized in late FY07.

QA/QC Procedures: EPA adheres to its approved Quality Management Plan in ensuring the quality of the data obtained from USGS. The data that will be used for the outcome measure is based on well-established QA-QC procedures in the USGS-NAWQA program (http://ca.water.usgs.gov/pnsp/rep/qcsummary/ and http://water.usgs.gov/owq/FieldManual/index.html).

Data Quality Review: The measure will utilize USGS NAWQA data. USGS is preeminent in the field of water quality sampling. Since 1991, the USGS NAWQA program has been collecting and analyzing data and information in major river basins and aquifers across the Nation. The program has undergone periodic external peer-review (http://dels.nas.edu/water/monitoring.php).

Data Limitations: This measure is under development. Data limitations will be characterized during developmental stages of the measure and a complete evaluation will be provided in the NAWQA 2011 "Cycle II" Study Report. EPA will request that USGS add additional insecticides to their sampling protocols to establish base line information for newer products that have been replacing the organophosphates (e.g., the synthetic pyrethroids).

Error Estimate: The USGS database provides estimates of analytical methods and associated variability estimates (http://ga.water.usgs.gov/nawqa/data.qa.html).

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References: USGS National Water-Quality Assessment (NAWQA) program's 2006 report: Pesticides in the Nation's Streams and Ground Water, 1992-2001.

The NAWQA 2011 "Cycle II" Study Report does not exist at this time – the sampling is in progress, thus there is no citation at this time. USGS has not published their sampling plan. There will be a USGS report in the 2011 timeframe.

FY 2009 Performance Measure:

- **Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate (PART measure)**

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the Toxic Exposure Surveillance System (TESS). Among the types of exposures reported are pesticide related exposures. The data collected include date of call, age, gender, location of exposure, route of exposure, substance exposed to, route of exposure, initial symptom assessment, treatment received and an evaluation of the medical outcome. Symptoms are categories as minor, moderate, or major with criteria for each category.

Data Source: PCCs provide telephone consultation to individuals and health care providers. Most PPCs are operated by a hospital or university and in aggregate serve 70-80% of the U.S. population. Each case is a separate file that needs to be manually loaded into an EPA database prior to performing statistical analysis. Trend analysis of the reported incidents could reveal problem chemicals and the effects of previous actions taken.

Methods, Assumptions and Suitability: We assume resources will continue to be available for the Agency to purchase the data and that adequate resources will be available at the local level to continue to fund the centers. The reduction in poisoning incidents is expected to result from mitigation measures made during the reregistration, from greater availability of lower risk alternative products resulting from the Agency's reduce risk registration process, from the continued implemention of worker protection enforcement and training.

QA/QC Procedures: PCCs must be certified by the American Association of Poison Control Centers (AAPCC). To be certified a PPC must have a board certified physician on call at all times, have AAPCC certified specialists available to handle all calls, have a comprehensive file of toxicology information readily available, maintain Standard Operating Procedures (SOPs), keep records on all cases and have an ongoing quality assurance program. In addition, EPA staff screen each case before analyzing the data set.

Data Quality Review: EPA conducts regular case reviews and audits to assure quality assurance of data collected. Also, as mentioned above, EPA staff reviews each case before entering into its database.

Data Limitations: Because PCC participation is voluntary and the available resources vary from year to year, the data contains uncertainty.

Error Estimate: Because the incidents are self-reported, there is a potential bias in the data. However, there is no reason to believe that the bias will change from year to year

New/Improved Data or Systems: Not known at this time.

References: Poison Control Centers TESS (Toxic Exposure Surveillance System) http://www.aapcc.org/poison1.htm

FY 2009 Performance Measure:

- **Incidents per 100,000 potential risk events in population occupationally exposed to pesticides (PART measure)**

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the Toxic Exposure Surveillance System (TESS). Among the types of exposures reported are pesticide related exposures in both residential and occupational settings. The data collected include date of call, age, gender, location of exposure, route of exposure, substance exposed to, initial symptom assessment, treatment received and an evaluation of the medical outcome. Symptoms are categorized as minor, moderate, or major with standard criteria for each category.

Data Sources:

Health Incident Data:
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

The Association of American Poison Control Centers (AAPCC) began collecting data for the purpose of identifying the leading hazards to humans from poisoning and to provide resources for the management of these exposures. Currently, the PCCs service approximately 98% of the nation.

Poison Control Centers are usually run by a hospital or university. Approximately 99% of the nation's Poison Control Centers (PCCs) send incident data to the Toxic Exposure Surveillance System (TESS). The national data collection system started in 1983. Each PCC receives a minimum of 10,000 calls annually. About 13% of calls are from health care providers treating patients and 87% of calls are from individuals who need assistance in managing an exposure to poison. From 1993-1996, 92% of reported exposures occurred in a residential setting. PCC collects data on exposures to any substance and pesticide poisonings make up about 3% of all cases. PCCs submit data to TESS 2 to 4 times per year.

Data from the PCC/TESS database will be used for the numerator.

The denominator number is calculated from several sources: Department of Labor's Bureau of Labor Statistics, which captures employment characteristics for the national workforce. The estimate of agricultural field workers is from the Department of Labor's National Agricultural Workers Survey; The denominator also uses EPA/OPP's annual report of Certified Applicators,

and an estimate for the number of field entries by farmworkers from the 1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard.

Methods, Assumptions and Suitability: Trend analysis of the reported incidents could reveal problem chemicals and the effects of previous actions taken.

Calculation Description:

For the Numerator :
Universe of Occupationally Exposed Individuals:

1. Certified Applicators = 1,100,000
2. "Under the Supervision" Applicators (Assume 4 X CA) = 4,000,000
3. Other Occupational Pesticide Users = 2,500,000*

* = Bureau of Labor Statistics calculates there are 50,000,000 employees in non-agricultural fields that we believe utilize pesticides as part of their business (e.g., healthcare support; food preparation; building & grounds cleaning & maintenance; production; etc.). We assume that 5% of those employees apply pesticides.

4. Agricultural Farmworkers = 1,800,000

Potential Pesticide Risk Events:

For occupational users (Groups #1 - 3 above), we assume every pesticide application has the potential to create a pesticide incident with adverse health effects. We conservatively estimate each individual in those groups makes 4 pesticide applications per year. Therefore,

7,600,000 occupational users X 4 applications/year = 30,400,000 Potential Pesticide Risk Events/Year

Agricultural Farmworkers spend an average of 105 days/year in the field (1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard). We assume that 5% of field entries present potential risk from pesticide exposure. Therefore,

105 days per/year X 5% = 5.25 Potential Pesticide Risk Events/Year/Farmworker
5.25 X 1,800,000 Ag Farmworkers = 9,450,000 Potential Pesticide Risk Events/Year

30,400,000 + 9,450,000 = 39,850,000 Total Potential Pesticide Risk Events/Year

Occupational Pesticide Incidents:

The Poison Control Centers' Toxic Exposure Surveillance System recorded there were an average of 1388 occupational pesticide incidents with adverse health impacts in 2001 – 2003, the most recent data available.

RATE OF INCIDENTS PER POTENTIAL PESTICIDE RISK EVENTS PER YEAR

1388 occupational pesticide incidents per 39,850,000 potential pesticide risk events/year	=	3.5 incidents per 100,000 potential pesticide risk events/year

QA/QC Procedures: PCCs must be certified by the American Association of Poison Control Centers (AAPCC). To be certified a PPC must have a board certified physician on call at all times, have AAPCC certified specialists available to handle all calls, have a comprehensive file of toxicology information readily available, maintain SOPs, keep records on all cases and have an ongoing quality assurance program.

Data Quality Review: For the incident data, regular case reviews and audits are scheduled to assure quality assurance of data collected by the Poison Centers. All data in the TESS system is subject to quality assurance requirements, including occupational incidents.

Data Limitations: The data in PCC/TESS originates from the public or health-care providers voluntary communications to the PCCs. Some number of pesticide-induced illnesses go unreported due to difficulty in diagnosis, symptoms that are non-specific to pesticides, and the fact that the public may not report. The under-reporting is considered a self-reporting bias.

The denominator data for non-agricultural workers is from 2004; more recent BLS data are not available.

Error Estimate: The number of potential risk events/year is most likely underestimated, because we used conservative estimates in estimating the potential number of events. For example, we estimated only 4 applications per year per individual which is likely to be a very low estimate.

New/Improved Data or Systems: Not known at this time.

References:

American Association of Poison Control centers: http://www.aapcc.org/poison1.htm
Department of Labor's National Agricultural Workers Survey: http://www.dol.gov/asp/programs/agworker/naws.htm
Department of Labor's Bureau of Labor Statistics: Occupational Employment and Wages, November 2004: http://www.bls.gov/news.release/archives/ocwage_11092005.pdf
EPA/OPP's annual report of Certified Applicators: http://www.epa.gov/oppfead1/safety/applicators/data.htm
1992 Regulatory Impact Analysis for the Agricultural Worker Protection Standard

FY 2009 Performance Measure:

- **Reduced cost per pesticide occupational incident avoided (PART efficiency)**

Performance Database:

Health Incident Data
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

The Association of American Poison Control Centers (AAPCC) began collecting data for the purpose of identifying the leading hazards to humans from poisoning and to provide resources for the management of these exposures.

Poison Control Centers are usually run by a hospital or university. Approximately 99% of the nation's Poison Control Centers (PCCs) send incident data to the Toxic Exposure Surveillance System (TESS), the national data collection system started in 1983. Each PCC receives a minimum of 10,000 calls annually. About 13% of calls are from health care providers treating patients and 87% of calls are from individuals who need assistance in managing an exposure to poison. From 1993-1996, 92% of reported exposures occurred in a residential setting. PCC collects data on exposures to any substance and pesticide poisonings make up about 3% of all cases. PCCs submit data to TESS 2 to 4 times per year.

Cost Data
Cost estimates are based on the President's budget and State and Regional Assistance Grants funding documents.

Data Source:

Health Incident Data
Poison Control Centers' Toxic Exposure Surveillance System (PCC/TESS)

Most cases in TESS are submitted by certified PCCs through their staff, and are received from the public.

Methods, Assumptions and Suitability: This efficiency measure is based on the annual number of occupational pesticide incidents. A critical assumption is that EPA's pesticide program's efforts have a direct impact on the decline of pesticide incidents and that additional external factors have no effect on the number of pesticide incidents (e.g.,all influences on occupational incidents arise from the program's efforts). From recent assessments, we do believe that occupational poisonings are declining and that OPP's actions contribute significantly to the reduction.

Calculation:

$$\frac{\text{Worker Safety Resources (\$)}}{\text{Pesticide Occupational Incidents Avoided}} = \text{Cost /Pesticide Occupational Incident Avoided}$$

Worker Safety Resources = Value of extramural and Full Time Employee (FTE) Resources from the President's Budget request identified as supporting EPA Headquarters worker protection activities; and State and Regional Assistance Grants

(STAG) monies. Does not include headquarters resources for worker protection in the Registration/Re-Registration/Registration Review programs, because would result in double-counting. Regional resources for field programs are in the form of FTEs, which are parsed differently into worker protection, water quality, and strategic agricultural initiatives by the Regions depending on their priority objectives. These data are not currently available. An additional complication is the fact that states provide substantial funding for these programs as well, and their contribution is not included here.

For recent years, annual STAG funds for worker safety (C&T and WP) total $6.6M. The President's Budget has remained relatively constant at $2.7M for Agricultural Worker Protection and $2.7M for Pesticide Applicator per year, for an average of $12M as the numerator in the baseline calculation.

Pesticide Occupational Incidents Avoided = Using pesticide incident data from Poison Control Centers' Toxic Exposure Surveillance System, OPP established a baseline for average incidents per year. Use of an average of three years is appropriate to account for inconsequential fluctuations in the counts.

This measure will be tracked as follows: we will review annual occupational incident data and compare it with the rolling average for the baseline. If the average number of incidents from the most recent three years is below the baseline, the difference will be the incidents avoided for use in the calculation.

QA/QC Procedures: Most cases in TESS are submitted by certified PCC. Certification of the PCC requires that there be board certified physicians with expertise in toxicology on-call at all times, poison information specialists available to handle calls, access to a major medical library, guidelines for follow-up of each case to determine the patient's final disposition or medical outcome. Taken together these criteria help to assure the quality of the data.

Each Poison Control Center uses standard format for data collection. Standard data elements include location of victim at the time of exposure, substance exposed to, route of exposure, initial symptom assessment, and evaluation of medical outcome after case follow up. Cases with symptoms are categorized by severity as minor, moderate, or major.

Data Quality Review: Trained PCC specialists review the case data and, based on the information provided and their knowledge of toxicology, doses, and timing of exposure, ascertain whether the incident was caused by pesticides.

Data Limitations: Experts believe pesticide poisonings are under-reported to surveillance sources, for reasons, including the symptoms of pesticide poisoning generally are difficult to identify; there are few biomarkers for pesticides; and because the exposed individual may not seek medical care or report their illness. Additionally, not all states require mandatory physician reporting, and those that do may have difficulty enforcing that requirement.

Error Estimate: As mentioned above, under-reporting is believed to be a problem in all pesticide incident data sets. There are a number of widely-ranging estimates for the amount of under-reporting, ranging from 25% to as much as a factor of a thousand.

New/Improved Data or Systems: OPP collects pesticide incident data under FIFRA section 6(a)2. FIFRA is the Federal Insecticide, Fungicide and Rodenticide Act; the statute which governs the program functions. Section 6(a)2 is mandatory reporting required of the registrants (registrants are those who have or seek registration of their pesticide products). However, details important to this measure are not routinely captured in this data set. We hope to improve the internal data systems that capture incidents reported by the regulated community. Currently, data are difficult to use and may not have needed detail. If these data were available, they could potentially be used to complement or replace the PCC/TESS data, depending on their quality.

References: none

FY 2009 Performance Measure:

- **Percent reduction in concentrations of pesticides detected in general population (PART measure)**

Performance Database: The Agency will use the Centers for Disease Control's (CDC's) National Health and Nutrition Examination Survey (NHANES) data from 1999-2002 as the baseline. For this measure, the Agency intends to report on the changes in levels of organophosphate pesticides at the 50^{th} percentile (or median.) This group of chemicals was selected for a number of reasons. A large proportion of data collected from the general population are detectable residues (or their metabolites) for the organophosphate pesticides. In addition, the metabolites for which the analyses are performed are derived exclusively from the OP pesticides. The Agency selected a measure based on central tendency because it provides an overall picture of trends and is not distorted by anomalies in the data. However, the Agency intends to follow a range of metrics to more fully understand trends in the data. The annual targets will change every two years because each survey is performed over a two year period.

Data Sources: NHANES (see above)

Methods, Assumptions and Suitability: The NHANES data were selected because the surveys provide a statistically representative data set for the entire U.S. population. It is an ongoing program, with funding from numerous cooperating Federal agencies. The data are based on measurement of chemical levels in blood and urine.

QA/QC Procedures: This large scale survey is performed in strict compliance with CDC QA/QC procedures.

Data Quality Review: The measure will utilize NHANES data. NHANES is a major program of the National Center for Health Statistics (NCHS). NCHS is part of the Centers for Disease Control and Prevention (CDC), U.S. Public Health Service, and has the responsibility for producing vital and health statistics for the Nation. The National Center for Health Statistics

(NCHS) is one of the Federal statistical agencies belonging to the Interagency Council on Statistical Policy (ICSP). The ICSP, which is led by the Office of Management and Budget (OMB), is composed of the heads of the Nation's 10 principal statistical agencies plus the heads of the statistical units of 4 nonstatistical agencies. The ICSP coordinates statistical work across organizations, enabling the exchange of information about organization programs and activities, and provides advice and counsel to OMB on statistical activities. The statistical activities of these agencies are predominantly the collection, compilation, processing or analysis of information for statistical purposes. Within this framework, NCHS functions as the Federal agency responsible for the collection and dissemination of the Nation's vital and health statistics. Its mission is to provide statistical information that will guide actions and policies to improve the health of the American people.

To carry out its mission, NCHS conducts a wide range of annual, periodic, and longitudinal sample surveys and administers the national vital statistics systems.

As the Nation's principal health statistics agency, NCHS leads the way with accurate, relevant, and timely data. To assure the accuracy, relevance, and timeliness of its statistical products, NCHS assumes responsibility for determining sources of data, measurement methods, methods of data collection and processing while minimizing respondent burden; employing appropriate methods of analysis, and ensuring the public availability of the data and documentation of the methods used to obtain the data. Within the constraints of resource availability, NCHS continually works to improve its data systems to provide information necessary for the formulation of sound public policy. As appropriate, NCHS seeks advice on its statistical program as a whole, including the setting of statistical priorities and on the statistical methodologies it uses. NCHS strives to meet the needs for access to its data while maintaining appropriate safeguards for the confidentiality of individual responses.

Three web links to background on data quality are below:
http://www.cdc.gov/nchs/about/quality.htm
http://www.cdc.gov/nchs/data/nhanes/nhanes_01_02/lab_b_generaldoc.pdf#search=%22quality%20control%20NHANES%22
http://www.cdc.gov/nchs/data/nhanes/nhanes_03_04/lab_c_generaldoc.pdf#search=%22quality%20NHANES%22

Data Limitations: Some limitations include that not all pesticides are included, it is a measure of exposure instead of risk, and there is a time-lag between EPA actions and the CDC's analysis of the data.

Error Estimate: There is the potential of identifying metabolites that comes from both a pesticide and another source.

New/Improved Data or Systems: Not known at this time.

References: Third National Report on Human Exposure to Environmental Chemicals 2005, CDC/National Center for Environmental Health/Environmental Health Laboratory http://www.cdc.gov/nchs/about/nhanes

FY 2009 Performance Measure:

- **Average cost and average time to produce or update an Endangered Species Bulletin (PART efficiency)**

Performance Database: The Bulletins Live! application is enabled by a multi-user relational database system that maintains a permanent archive with dates of the draft and final content for each endangered species protection Bulletin that is created or updated in the system. When the Bulletins Live! application is made available to the public, EPA will take over the complete Bulletin production process, which is currently carried out by the United States Geological Survey (USGS) staff through an Interagency Agreement (see below). Additionally, tracking and summary reporting of all endangered species mitigation actions including the time between which a decision is made to issue a Bulletin and its availability to the public will be made available as a part of the OPP "PRISM" information system that is planned for development in FY 2007. This system will track the staff working on mitigation development and bulletin production, and the time spent on these activities, allowing for a calculation of the cost per bulletin issued with Bulletins Live!

Data Source: The data necessary to track progress towards the targets for this measure are currently being collected by EPA. The Bulletins are being developed for EPA by the U.S. Geological Survey (USGS) Cartography and Publishing Program under an Interagency Agreement (IAG) with OPP. The data will be collected annually through the end-of-year report under the Interagency Agreement (IAG). The baseline year will be 2004 cost and time averages ($4000.00 and 100 hours per Endangered Species Bulletin production or update).

Methods, Assumptions and Suitability: These Bulletins are a critical mechanism for ensuring protection of endangered and threatened species from pesticide applications Bulletins are legally enforceable extensions to pesticide labels that include geographically specific use limitations for the protection of endangered species. The faster the Bulletins can be developed, the earlier the protections are available to endangered and threatened species. Similarly, the less it costs to produce the Bulletins, the more Bulletins can be produced within available budget and the greater the impact on saving endangered and threatened species.

This measure is calculated as follows:

> 100 – [(Sum of the costs to produce or update Endangered Species Bulletins in current 12 month period/number of bulletins produced or updated in the same 12 month period)/(Sum of the costs to produce or update Endangered Species Bulletins in previous 12 month period) X 100] This is intended to be a measure that captures improvements in current year cost per bulletin vs. previous year cost per bulletin.
>
> 100 – [(Sum of the time in hours to produce or update Endangered Species Bulletins in current 12 month period/number of bulletins produced or updated in the same 12 month period)/(Sum of the time in hours to produce or update Endangered Species Bulletins in

previous 12 month period/number of bulletins produced or updated in the previous 12 month period) X 100]

QA/QC Procedures: EPA adheres to its approved Quality Management Plan to ensure the overall quality of data in the Bulletins Live! system. Bulletins pass through a multi-level quality control and review process before being released to the public. After the initial Bulletin is created by trained staff in the Endangered Species Protection Program, the draft is automatically routed in the system to a senior staff member who reviews the information in the Bulletin as a quality control check. After this Agency review, Bulletins are then subject to review and comment by Regional and State regulatory partners responsible for different aspects of the field implementation program and Bulletin enforcement.

Data Quality Reviews: Data quality reviews for the Bulletins themselves are ongoing through the QA/QC methodology described above. Data quality reviews for components of the measure (time per bulletin and cost per bulletin) will be carried out by the Project Officers who manage the Bulletins Live! and PRISM systems.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: The web-based Bulletins Live! system will facilitate the expedited production and delivery of endangered species protection Bulletins as compared to the 2004 baseline.

References:
Endangered Species Protection Program website and Bulletins Live!: http://www.epa.gov/espp; QMP: Quality Management Plan for the Office of Pesticides Program, February 2006; Endangered Species Act.

FY 2009 Performance Measure:

- **Reduce cost per acre using reduced risk pest management practices compared to the grant and/or contract funds expended on environmental stewardship (PART efficiency)**

Performance Database: Strategic Agricultural Initiative (SAI) database contains the SAI grants funds and acreage data. We are going to track the number of acres, by particular crop, under reduced risk pest management that were part of a grant and/or contract. This database is currently on the web site of our cooperator, the American Farmland Trust. Eventually, Pesticide Environmental Stewardship Program (PESP) data will be included. PESP data are those reported to EPA in grant reports. We look at the adoption rate of reduced risk pesticides and compare it to the cost of the grant. The performance data are the acres impacted by the project verses the amount of grant or contract funds.

Data Source: Reports from grantees and contractors will be used as well as available databases to track the adoption of safer pest management practices. Such data sources include the USDA National Agricultural Statistics Service's surveys, Doane Marketing Research data, and pesticide usage records provided by user groups. Agricultural pesticide user groups who are members of PESP frequently report their use of safer pest management practices as part of their annual reports

Methods, Assumptions and Suitability: Each grantee or contractor is required to provide reports on their project including the success of adoption of safer pest management practices. For SAI grants, the SAI Coordinator in each of the 10 EPA Regional Offices enters the results from the SAI grants into the SAI database. The SAI Coordinator at EPA Headquarters encourages the Regional Coordinators to do this in a timely fashion. EPA Headquarters' Project Officer of the PESP grant serves the same function, making sure interim and final reports are provided to EPA without delay. EPA will track the adoption of new practices using publicly and commercially available databases, such as those described above. At times, data also are available on the adoption of a particular biopesticide or other reduced risk pesticide from the registrant of that product or from a user group that is adopting the new technology. This data can be very useful in tracking adoption in the early stages or in cases where little data is available, such as for minor crops. Data supplied by registrants can be compared to information supplied to EPA under Section 7 of FIFRA to identify major errors, but it would be hard to identify minor errors or flaws in the data.

QA/QC Procedures: EPA QA/QC procedures are followed for each grant and/or contract where environmental data is being collected. Part of the Agency's Quality Management Plan requires that grantees and/or contractors have a QA/QC program in place before the grant/contract is awarded. A staff member, typically the project officer for the grant or contract, typically often conducts onsite visits every year to ensure QA/QC procedures is being followed. Typically, field trials and demonstrations are visited by the Regional SAI Coordinators or the EPA grantee for PESP work. Data from other internal and external sources, where available, will be used to determine the validity of the information provided by registrants and grower groups.

Data Quality Reviews: Staff and management of the Environmental Stewardship Branch and the Regional SAI Coordinators will perform data quality reviews under the leadership of program QA/QC officers.

Data Limitations: Major pesticide usage surveys will likely miss minor usages. Voluntary reporting by grantees and grower groups on the use of their reduced risk pest management practices introduces more error/bias than if a statistically valid sample were taken. However, funding and managing this kind of sample survey will be a challenge.

Error Estimate: Error estimates for established databases such as Doane and NASS surveys are documented by these organizations in their survey reports. Audits of grants are intended to reduce errors, but best estimates may be relied upon when statistically valid samples are not available.

New/Improved Data or Systems: EPA will improve the existing SAI database by including PESP data or will create a comparable database to track the PESP data.

References: http://www.epa.gov/oppbppd1/PESP/ and http://www.aftresearch.org/sai/collaborations

FY 2009 Performance Measures:

- **Register reduced-risk pesticides, including biopesticides**
- **New Chemicals (Active Ingredients)**
- **New Uses**
- **Percent reduction in review time for registration of conventional pesticides (Long-term PART efficiency measure)**
- Maintain timeliness of Section 18 Decisions

Performance Database: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System) consolidates various pesticides program databases. It is maintained by the EPA and tracks regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration. In addition to tracking decisions in OPPIN/PRISM, manual counts are also maintained by the office on the registrations of reduced risk pesticides. Results for reduced risk pesticides, new active conventional ingredients, and new uses have been reported since 1996. The results are calculated on a fiscal year (FY) basis. For antimicrobial new uses, results have been reported since FY 2004 on a FY basis. S18 timeliness was reported on a FY basis for the first time in FY 2005.

Data Source: Pesticide program reviewers update the status of the submissions and studies as they are received and as work is completed by the reviewers. The status indicates whether the application is ready for review, the application is in the process of review, or the review has been completed.

Methods, Assumptions and Suitability: The measures are program outputs which when finalized, represent the program's statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment, and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, registration outputs do provide a means for reducing risk by ensuring that pesticides entering the marketplace meet the latest health standards, and as long as used according to the label are safe.

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). All registration actions must employ sound science and meet the Food Quality

Protection Act (FQPA) new safety standards. All risk assessments are subject to public and scientific peer review. The office adheres to its Quality Management Plan (May 2000) in ensuring data quality and that procedures are properly applied.

Data Quality Review: These are program outputs. EPA staff and management review the program outputs in accordance with established policy for the registration of reduced-risk pesticides as set forth in Pesticide Regulation Notice 97-3, September 4, 1997.

Data Limitations: None. All required data must be submitted for the risk assessments before the pesticide is registered. If data are not submitted, the pesticide is not registered. As stated above, a reduced risk pesticide must meet the criteria set forth in PRN 97-3 and all registrations must meet FQPA safety requirements. If a pesticide does not meet these criteria, it is not registered. If an application for a reduced risk pesticide does not meet the reduced risk criteria, it is reviewed as a conventional active ingredient.

Error Estimate: N/A

New/Improved Data or Systems: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System), which consolidates various pesticides program databases, will reduce the processing time for registration actions.

References: FIFRA Sec 3(c)(5); FFDCA Sec 408(a)(2); EPA Pesticide Registration Notice 97-3, September 4, 1997; Food Quality Protection Act (FQPA) 1996; OPP Quality Management Plan, May 2000); Endangered Species Act.

FY 2009 Performance Measure:

- **Product Reregistration**

Performance Database: The OPPIN/PRISM (Office of Pesticide Programs Information Network/Pesticide Registration Information System) consolidates various EPA program databases. It is maintained by the EPA and tracks regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's reregistration. In addition to tracking decisions in OPPIN/PRISM, manual counts are also maintained by the office on the reregistration decisions. Decisions are logged in as the action is completed, both for final decisions and interim decisions.

Data Source: EPA's Pesticides Program staff and managers.

Methods, Assumptions and Suitability: The measures are program outputs which represent the program's statutory requirements to ensure that pesticides entering the marketplace are safe for human health and the environment and when used in accordance with the packaging label present a reasonable certainty of no harm. While program outputs are not the best measures of risk reduction, they do provide a means for reducing risk in that the program's safety review prevents dangerous pesticides from entering the marketplace.

QA/QC Procedures: All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) new safety standards. All risk assessments are subject to public and scientific peer review. The office adheres to the procedures for quality management of data as outlined in its QMP approved May 2000.

Data Quality Review: Management reviews the program counts and signs off on the decision document.

Data Limitations: None known.

Error Estimate: N/A. There are no errors associated with count data.

New/Improved Data or Systems: The OPPIN/PRISM, which consolidates various pesticides program databases, will contribute to reducing the processing time for reregistration actions.

References: EPA Website http://www.epa.gov/pesticides EPA Annual Report 2002 EPA Number 735-R-03-001; 2003 Annual Performance Plan OPP Quality Management Plan, May 2000; Endangered Species Act.

FY 2009 Performance Measure:

- **Percentage of agricultural acres treated with reduced-risk pesticides (PART measure)**

Performance Database: EPA uses an external database, Doane Marketing Research data, for this measure. The data have been reported for trend data since FY 2001 on an FY basis.

Data Source: Primary source is Doane Marketing Research, Inc. (a private sector research database). The database contains pesticide usage information by pesticide, year, crop use, acreage and sector.

Methods, Assumptions and Suitability: 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). EPA's statistical and economics staff review data from Doane. Information is also compared to prior years for variations and trends as well as to determine the reasons for the variability.

Doane sampling plans and QA/QC procedures are available to the public at their website. More specific information about the data is proprietary and a subscription fee is required. Data are weighted and a multiple regression procedure is used to adjust for known disproportionalities (known disproportionality refers to a non proportional sample, which means individual

respondents have different weights) and ensure consistency with USDA and state acreage estimates.

QA/QC Procedures: All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) new safety standard. All risk assessments are subject to public and scientific peer review. Doane data are subject to extensive QA/QC procedures, documented at their websites. In ensuring the quality of the data, EPA's pesticide program adheres to its Quality Management Plan (QMP), approved May 2000.

The main customers for Doane pesticide usage data are the pesticide registrants. Since those registrants know about sales of their own products, they have an easy way to judge the quality of Doane provided data. If they considered the quality of the data to be poor, they would not continue to purchase the data.

Data Quality Review: Doane data are subject to extensive internal quality review, documented at the website. EPA's statistical and economics staff review data from Doane. Information is also compared to prior years for variations and trends as well as to determine the reasons for the variability. For some crops and states, comparisons are also made with a more limited pesticide usage database from the National Agricultural Statistics of USDA.

Data Limitations: Doane data are proprietary; thus in order to release any detailed information, the Agency must obtain approval. There is a data lag of approximately 12-18 months, due to the collection of data on a calendar year (CY) basis, time required for Doane to process data, lead time for EPA to purchase and obtain data, plus the time it takes to review and analyze the data within the office's workload.

Error Estimate: Error estimates differ according to the data/database and year of sampling. This measure is compiled by aggregating information for many crops and pesticides. While considerable uncertainty may exist for a single pesticide on a single crop, pesticide use data at such a highly aggregated level are considered quite accurate. Doane sampling plans and QA/QC procedures are available to the public at their website. More specific information about the data is proprietary and a subscription fee is required. Data are weighted and multiple regression procedure is used to adjust for known disproportionalities and ensure consistency with USDA and state acreage estimates.

New/Improved Data or Systems: These are not EPA databases; thus improvements are not known in any detail at this time.

References: EPA Website; EPA Annual Report; Annual Performance Plan and Annual Performance Report, http://www.ams.usda.gov/science/pdp/download.htm; Doane Marketing Research, Inc.: http://www.doanemr.com; http://www.usda.gov/nass/pubs and http://www.usda.nass/nass/nassinfo; FFDCA Sec 408(a)(2); EPA Pesticide Registration Notice 97-3, September 4, 1997; Endangered Species Act.

FY 2009 Performance Measure:

- **Annual number of chemicals with proposed Acute Exposure Guideline Levels (AEGLs) values. (PART measure)**

Performance Database: Performance is measured by the annual number of chemicals with "Proposed" AEGL values as recorded in the AEGL Chemical Status sans Structure Access 2000 database containing the approval dates for proposed AEGL values. The results are calculated on a fiscal year basis.

Data Source: EPA manages a Federal Advisory Committee Act (FACA) committee that reviews short term exposure values for extremely hazardous chemicals. The supporting data, from both published and unpublished sources and from which the AEGL values are derived, are collected, evaluated, and summarized by FACA Chemical Managers and Oak Ridge National Laboratory's scientists. Proposed AEGL values are published for public comment in the Federal Register. After reviewing public comment, interim values are presented to the AEGL Subcommittee of the National Academy of Sciences (NAS) for review and comment. After review and comment resolution, the National Research Council under the auspices of the National Academy of Sciences (NAS) publishes the values as final. Although proposed AEGLs are not considered final until so designated by the NAS, the proposed values are suitable for many purposes. This performance measure is tied to proposed values rather than to final ones because actions through the proposal stage of the AEGL process are largely under EPA's control whereas subsequent action to finalize the AEGL values is largely a matter within NAS jurisdiction.

Methods and Assumptions: The work of the National Advisory Committee's Acute Exposure Guideline Levels (NAC/AEGL, formally chartered under the Federal Advisory Committee Act) adheres to the 1993 U.S. National Research Council/National Academies of Sciences (NRC/NAS) publication *Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances*. NAC/AEGL, in cooperation with the National Academy of Sciences' Subcommittee on AEGLs, has developed standard operating procedures (SOPs), which are followed by the program. These have been published by the National Academy Press and are referenced below. The number of AEGL values approved as "proposed" by the NAC/AEGL FACA Committee represents the measure of performance. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: This output measure supports the long term goal of assigning proposed Acute Exposure Guideline Levels for all priority chemicals by 2011.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. QA/QC procedures, specific to AEGLs, include public comment via the Federal Register process; review and approval by the FACA committee; and review and approval by the NAS/AEGL committee and their external reviewers.

Data Quality Review: Not applicable. The counts used as a basis for this measure are fully transparent.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting this measure.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: Access databases, spreadsheets and other files are maintained and improved on an ongoing basis. A new database is being developed to document rationales used to develop AEGL values. Once completed, this new database should enhance the efficiency of AEGL development.

References: Standing Operating Procedures for Developing Acute Exposure Guideline Levels for Hazardous Chemicals, National Academy Press, Washington, DC 2001 (http://www.nap.edu/books/030907553X/html/). NRC (National Research Council). 1993. Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances. Washington, DC: National Academy Press.
AEGL Program website at http://www.epa.gov/oppt/aegl

FY 2009 Performance Measure:

- **Percent reduction from baseline year in total EPA cost per chemical for which Proposed AEGL value sets are developed (PART efficiency measure)**

Performance Database: OPPT maintains records on AEGL program income, expenditures and carryover from one year to the next, and on the number of FTEs allocated to the program. Information from these records is aggregated to determine total EPA cost per chemical for which a proposed AEGL data set is tracked through a GPRA and Budget Accomplishment Word document. The denominator of the measure – number of proposed AEGL value sets – is tracked using the AEGL Chemical Status sans Structure Access 2000 database containing the approval dates for proposed AEGL values.

Data Source: EPA manages a Federal Advisory Committee Act (FACA) committee that reviews short term exposure values for extremely hazardous chemicals. The supporting data, from both published and unpublished sources and from which the AEGL values are derived, are collected, evaluated, and summarized by FACA Chemical Managers and Oak Ridge National Laboratory's scientists. Proposed AEGL values are published for public comment in the Federal Register and then referred to the National Academies of Science (NAS) for further review and action. Although proposed AEGLs are not considered final until so designated by the NAS, the proposed values are suitable for many purposes. This performance measure is tied to proposed values rather than to final ones because actions through the proposal stage of the AEGL process are largely under EPA's control whereas subsequent action to finalize the AEGL values is largely a matter within NAS jurisdiction.

Methods and Assumptions: The methods involved in developing and reporting on this performance measure consist of simple computational steps performed on data relating to AEGL cost and accomplishment. For these computational steps it is necessary to track the number of

FTEs assigned to the AEGL program and then find the associated labor cost by multiplying by standard cost-of-living factors. Likewise, the extramural cost associated with managing the program is determined by pulling cost and budgetary data from the relevant files, multiplying an appropriate percentage estimating the proportion of staff and contractor resources devoted to proposed AEGL development, summing as needed, and adjusting for inflation. One assumption underlying these computations is that the appropriate percentage is used to reasonably estimate the proposal stage's share of total cost devoted to AEGLs. Targets are based on what is considered reasonable and achievable.

The data used to estimate this performance measure represent all the costs for developing a proposed AEGL value set and are the most acceptable for this requirement. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: The indicators used for this measure are suitable because reductions in cost per AEGL value are expected to result from improvements in program implementation. These cost reductions will enable EPA to achieve the goals of the AEGL program with greater efficiency.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. Specific QA/QC procedures for AEGL development include public comment via the Federal Register process; review and approval by the FACA committee; and review and approval by the NAS/AEGL committee and their external reviewers. AEGL documents are formally reviewed for QC purposes by designated contractors and EPA staff at critical junctures utilizing detailed checklists. Cost information from available records is also subjected to QA/QC controls.

Data Quality Review: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting this measure.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: Access databases, spreadsheets and other files are maintained and improved on an ongoing basis. A new database is being developed to document rationales used to develop AEGL values. Once completed, this new database should enhance the efficiency of AEGL development.

References: Standing Operating Procedures for Developing Acute Exposure Guideline Levels for Hazardous Chemicals, National Academy Press, Washington, DC 2001 (http://www.nap.edu/books/030907553X/html/). NRC (National Research Council). 1993.

Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances. Washington, DC: National Academy Press. AEGL Program website at http://www.epa.gov/oppt/aegl

FY 2009 Performance Measures:

- **Number of cases of children aged 1-5 years with elevated blood lead levels (> 10 ug/dL) (PART measure)**
- **Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old. (PART measure)**

Performance Database: Data from the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (NHANES) is recognized as the primary database in the United States for national blood lead statistics. NHANES is a probability sample of the non-institutionalized population of the United States. Data are collected on a calendar year basis, and are currently released to the public in two year sets. Blood lead levels are measured for participants who are at least one year old. The survey collects information on the age of the participant at the time of the survey.

Data Source: The National Health and Nutrition Examination Survey is a survey designed to assess the health and nutritional status of adults and children in the U.S. The survey program began in the early 1960s as a periodic study, and continues as an annual survey. The survey examines a nationally representative sample of approximately 5,000 men, women, and children each year located across the U.S. CDC's National Center for Health Statistics (NCHS) is responsible for the conduct of the survey and the release of the data to the public. NCHS and other CDC centers publish results from the survey, generally in CDC's Morbidity and Mortality Weekly Report (MMWR), but also in scientific journals. In recent years, CDC has published a National Exposure report based on the data from the NHANES. The most current National Report on Human Exposure to Environmental Chemicals was released July 2005, and is available at the Web site http://www.cdc.gov/exposurereport/. The Fourth National Exposure report is expected in the summer of 2008.

Methods and Assumptions: Detailed interview questions cover areas related to demographic, socio-economic, dietary, and health-related questions. The survey also includes an extensive medical and dental examination of participants, physiological measurements, and laboratory tests. Specific laboratory measurements of environmental interest include: metals (e.g. lead, cadmium, and mercury), VOCs, phthalates, organophosphates (OPs), pesticides and their metabolites, dioxins/furans, and polyaromatic hydrocarbons (PAHs). NHANES is unique in that it links laboratory-derived biological markers (e.g. blood, urine etc.) to questionnaire responses and results of physical exams. For this performance measure, NHANES has been recognized as the definitive source. Estimates of the number of children 1-5 years with an elevated blood lead level based on NHANES have been published by CDC, most recently in May 2005. (See http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm). Analytical guidelines issued by NCHS provide guidance on how many years of data should be combined for an analysis. The NHANES data directly estimate the values included in the two performance measures and are

nationally recognized as the best source of this data. This data source measures blood levels in the same units (i.e., ug/dL) and at standard detection limits.

Suitability: The first measure supports the long-term goal of eliminating childhood lead poisoning as a public health concern by the year 2010. Data are collected on a calendar year basis and released to the public in two-year data sets. Data as of May 2005 reflecting 1999-2002 results, demonstrate progress towards the EPA's long-term target.

The second measure examines the disparities of blood lead levels in low-income children compared to non low-income children and uses this measure to track progress towards EPA's long-term goal of eliminating childhood lead poisoning in harder to reach vulnerable populations.

QA/QC Procedures: Background documentation is available at the NHANES Web site at http://www.cdc.gov/nchs/nhanes.htm. The analytical guidelines are available at the Web site http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

Data Quality Reviews: CDC follows standardized survey instrument procedures to collect data to promote data quality, and data are subjected to rigorous QA/QC review. Additional information on the interview and examination process can be found at the NHANES web site at http://www.cdc.gov/nchs/nhanes.htm.

Data Limitations: NHANES is a voluntary survey and selected persons may refuse to participate. In addition, the NHANES survey uses two steps, a questionnaire and a physical exam. There are sometimes different numbers of subjects in the interview and examinations because some participants only complete one step of the survey. Participants may answer the questionnaire but not provide the more invasive blood sample. Special weighting techniques are used to adjust for non-response. Seasonal changes in blood lead levels cannot be assessed under the current NHANES design. Because NHANES is a sample survey, there may be no children with elevated blood lead levels in the sample, but still some children with elevated blood lead levels in the population.

Error Estimate: Because NHANES is based on a complex multi-stage sample design, appropriate sampling weights should be used in analyses to produce estimates and associated measures of variation. Recommended methodologies and appropriate approaches are addressed in the analytical guidelines provided at the NHANES Web site http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

New/Improved Data or Systems: NHANES has moved to a continuous sampling schedule, scheduled release of data, and scheduled release of National Exposure reports by CDC.

References: 1) the NHANES Web site, http://www.cdc.gov/nchs/nhanes.htm; 2) the Third National Report on Human Exposure to Environmental Chemicals Web site, http://www.cdc.gov/exposurereport/; 3) Morbidity and Mortality Weekly Report (MMWR) article with the most recent estimate of the number of children with elevated blood lead levels, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm; 4) NHANES Analytical

Guidelines, http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm.

FY 2009 Performance Measure:

- **Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process (PART efficiency measure)**

Performance Database: The National Program Chemicals Division (NPCD) in the Office of Pollution Prevention and Toxics (OPPT) maintains the Federal Lead-Based Paint Program (FLPP) database, an electronic database of applications for certification by individuals and firms and applications for accreditation by training providers in states and tribal lands administered by a Federal lead program. The database provides a record of all applications for certification or accreditation for Federally-managed lead programs and the actions on those applications including final decisions and the multiple steps in the process used for measurement. The database is augmented by hard copy records of the original applications. EPA uses an Oracle Discoverer application to query the database to collect measurable performance data.

Data Source: The FLPP database is available internally to EPA Headquarters and Regional lead program staff who process the applications or oversee the processing. The database is maintained on an EPA Research Triangle Park (RTP), North Carolina server. Access to the database is granted by the Lead, Heavy Metals, and Inorganics Branch (LHMIB) in NPCD. Overall maintenance of the database and periodic improvements are handled by a contractor, currently ICF Consulting, located in Fairfax, Virginia. Data entry of application data is conducted by a second contractor, currently Optimus Corporation, located in Silver Spring, Maryland. Optimus Corporation maintains the file of the original applications. Each EPA Regional office maintains a file of copies of the original applications for that region.

Methods and Assumptions: Each complete application for certification or accreditation in Federally-managed states and tribal lands is processed (approximately 3000 per year). Certification is issued if all criteria are met. Some applications may be returned to the applicant or withdrawn by the applicant. For the applications that are fully processed, the length of time for EPA processing can be determined from date fields in the FLPP database. Accordingly, a census of all the fully processed applications for certification is periodically conducted, and the percentage of applications that took more than the prescribed number of days (e.g., 20) of EPA effort to process is computed based on this census. The census is conducted every six months, and the annual percentage calculated appropriately from the six month percentages. The data used to estimate this performance measure directly reflect all information that has been recorded pertaining to certification applications and are the most acceptable for this requirement. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: This measure tracks EPA Headquarters and Regional effort in processing lead-based paint certification and refund applications. This measure reflects an integral part of the Lead Program and ensures proper training for lead-based professionals. Data are available mid-year and end-of-year and enable the program to demonstrate program efficiencies and enhance accountability.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. In addition, NPCD has an approved Quality Management Plan in place, dated January 2005. Applications and instructions for applying for certification and accreditation are documented and available at the Web site http://www.epa.gov/lead/pubs/traincert.htm. Documentation for the FLPP database is maintained internally at EPA and is available upon request.

Data Quality Reviews: The FLPP database is an internal EPA database, maintained for the purpose of processing and tracking applications. The database is interactive, and operational usage in processing applications by Headquarters and the Regional offices provides ongoing internal quality reviews. Further, EPA periodically checks contractors' data entry quality.

Data Limitations: Applications that were returned to the applicant or withdrawn by the applicant are not captured in the database and are out of scope for this performance measure. While the report is based on a census, it generates some duplicative data, which must be removed manually. Efforts are made to remove all duplicative data, while preserving valid data. However, because this is a non-automated process, a small amount of human error is possible. Some variability occurs due to unique conditions that vary by Region. Some Regions consistently process applications in less time than others. This variability may be due to factors such as badge printing capabilities and economies of scale.

Error Estimate: There is little or no sampling error in this performance measure, because it is based on a census of all applicable records.

New/Improved Data or Systems: The FLPP database is scheduled to undergo improvements in the next few years after the renovation, remodeling and painting rule is finalized. The performance measurement system will help determine if there is a change in timeliness after the improvements are implemented.

References: 1) Quality Management Plan for National Program Chemicals Division, January 2005; 2) FLPP database documentation; 3) URL for Applications and Instructions, http://www.epa.gov/lead/pubs/traincert.htm.

FY 2009 Performance Measures:

- **Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities (PART measure)**
- **Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities [PART measure]**

Performance Database: The Risk Screening Environmental Indicators (RSEI) Model feeds these measures and uses annual reporting from individual industrial facilities along with a variety

of other information to evaluate chemical emissions and other waste management activities. RSEI incorporates detailed data from EPA's Toxics Release Inventory (TRI) and Integrated Risk Information System, the U.S. Census, and many other sources. Due to a two year TRI data lag, most recent performance data are only available for FY 2005 and earlier. The data are based on calendar year.

Data Source: The RSEI model incorporates data on chemical emissions and transfers and facility locations from EPA's Toxics Release Inventory; chemical toxicity data from IRIS; facility location data from EPA's Facility Registry System (FRS); stack data from EPA's AIRS Facility Subsystem and National Emissions Trends Database and the Electric Power Research Institute; meteorological data from the National Climatic Data Center; stream reach data from EPA's Reach File 1 Database; stream discharge data from EPA's Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS); data on drinking water systems from EPA's Safe Drinking Water Information System; fishing activity data from U.S. Fish and Wildlife; exposure factors from EPA's Exposure Factor Handbook; and population data from the U.S. Census Bureau.

Methods and Assumptions: The RSEI Model generates unique, unitless, numerical values, known as "Indicator Elements" using the factors pertaining to surrogate dose, toxicity and exposed population for each release-exposure event. Indicator Elements are risk-related measures generated for every possible combination of reporting facility, chemical, release medium, and exposure pathway (inhalation or ingestion). Together these values form the building blocks to describe exposure scenarios of interest. Indicator Elements are like index numbers that can be compared to one-another but do not reflect *actual* risk, and are proportional to the modeled relative risk of each release (incrementally higher numbers reflect greater estimated risk). These Indicator Elements are summed in various ways to represent the risk-related results for releases users are interested in assessing. RSEI results are for comparative purposes and are only meaningful when compared to other scores produced by RSEI. These data are acceptable for use in performance measurement as they are national data reflecting releases and transfers of chemicals from manufacturing facilities, including a number of high production volume chemicals i.e., the data of interest for this measure.

Suitability: The first measure supports the Chemical Risk Review and Reduction program's goal to reduce risk from new and existing chemicals. This measure provides a suitable year to year comparison against a long term goal of 50% reduction in the RSEI index. The second measure supports the long term goal to reduce the RSEI index for HPV chemicals 45% by 2011. This measure provides a suitable year to year comparison against this goal and looks specifically at the reduction of risk for the subset of TRI chemicals that are also HPV chemicals. The year to year comparison can reveal trends in the risk from HPV chemicals over time. Despite a two year lag in TRI data, annual comparisons of overall RSEI results (first measure) and RSEI HPV results (second measure) can reveal trends in chemical risk over time. Further, depending on how the user wishes to aggregate data, RSEI can also address trends nationally, regionally, by state or smaller geographic areas.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention,

Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort. Additionally because TRI facilities self-report release data and occasionally make errors. TRI has quality control functions and an error-correction mechanism for reporting such mistakes. Finally during each RSEI update, the output data are checked against TRI data for consistency, and the results are compared against previous years' RSEI results.

Data Quality Reviews: RSEI depends upon a broad array of data resources, each of which has completed a data-specific quality review process managed by the providers of the data sources. RSEI includes data from the many sources listed in "Data Sources", above. All data are collected for regulatory or programmatic purposes and are of sufficient quality to be used by EPA, other Federal agencies, and state regulatory agencies. Over the course of its development, RSEI has been the subject of three reviews by EPA's Science Advisory Board (SAB). The RSEI model has undergone continuous upgrading since the 1997 SAB Review. Toxicity weighting methodology was completely revised and subject to a second positive review by SAB (in collaboration with EPA's Civil Rights program); air methodology was revised and groundtruthed using New York data to demonstrate high confidence; water methodology has been revised in collaboration with EPA's Water program. When the land methodology has been reviewed and revised, EPA will have completed its formal, written response to the 1997 SAB Review.

Data Limitations: RSEI relies on facility-specific data (for parameters such as stack height, discharge stream reach, location) from EPA data sources. Where such data are not available, default assumptions are used, or in some cases, the release is not modeled. Offsite releases (from transfers of toxic chemicals) are particularly affected by a lack of reported TRI data, and while RSEI addresses this through a process that optimizes the available data, the data are limited and of uneven quality. In addition, toxicity data are not available for some of the less-toxic TRI chemicals. Releases to water are not available for Alaska, Hawaii, Puerto Rico and U.S. territories, and some releases to water (for reporting facilities and offsite facilities) may not be modeled because of inadequate coverage in the stream reach data. It should also be noted that TRI data include releases only from TRI-reportable facilities for TRI-reportable chemicals. It does not include all releases from reporting facilities or all releases of TRI-reportable chemicals. TRI data may also have errors that are not corrected in the standard TRI QC process.

Error Estimate: In developing the RSEI methodology, both sensitivity analyses and groundtruthing studies have been used to address model accuracy (www.epa.gov/opptintr/rsei/. For example, groundtruthing of the air modeling performed by RSEI compared to site-specific regulatory modeling done by the state of New York showed virtually identical results in both rank order and magnitude. However, the complexity of modeling performed in RSEI, coupled with un-quantified data limitations, limits a precise estimation of errors that may either over- or under-estimate risk-related results.

New/Improved Data or Systems: The program regularly tracks improvements in other Agency databases (e.g., Safe Drinking Water Information System and Reach File databases) and incorporates updated data into the RSEI databases. Such improvements can also lead to methodological modifications in the model. Corrections in TRI reporting data for all previous

years are captured by the annual updates to the RSEI model databases. EPA is now using data from the FRS to assign geographic locations to TRI facilities.

References: The methodologies used in RSEI were first documented for the 1997 review by the EPA Science Advisory Board. The Agency has provided this and other updated technical documentation on the RSEI Home Page.

U.S. EPA Office of Pollution Prevention and Toxics, Risk Screening Environmental Indicators Model (RSEI) Home Page. Internet: http://www.epa.gov/opptintr/rsei/

U.S. EPA Office of Pollution Prevention and Toxics, Risk Screening Environmental Indicators Model, Peer Reviews. Internet: http://www.epa.gov/oppt/rsei/pubs/faqs.html

U.S. EPA Office of Pollution Prevention and Toxics, RSEI Methodology Document. Internet: http://www.epa.gov/opptintr/rsei/pubs/method2004.pdf

U.S. EPA Office of Pollution Prevention and Toxics, RSEI User's Manual. Internet: http://www.epa.gov/opptintr/rsei/pubs/users_manual.pdf

U.S. EPA Office of Pollution Prevention and Toxics, RSEI Fact Sheet,. Internet: http://www.epa.gov/opptintr/rsei/pubs/factsheet_v2-1.pdf

FY 2009 Performance Measure:

- **Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers or environment**

Performance Database: Implementation of this measure will require the use of several EPA databases: Confidential Business Information Tracking System (CBITS), pre-manufacture notice (PMN) CBI Local Area Network (LAN), 8(e) database for new chemicals called ISIS, and the Focus database. The following information from these databases will be used collectively in applying this measure:

• CBITS: Tracking information on Pre-Manufacture Notices (PMNs) received;

• PMN CBI LAN: Records documenting PMN review and decision, assessment reports on chemicals submitted for review. In addition, the information developed for each PMN is kept in hard copy in the Confidential Business Information Center (CBIC);

• ISIS: Data submitted by industry under the Toxic Substances Control Act (TSCA) Section 8(e). TSCA 8(e) requires that chemical manufacturers, processors, and distributors notify EPA immediately of new (e.g. not already reported), unpublished chemical information that reasonably supports a conclusion of substantial risk. TSCA 8(e) substantial risk information notices most often contain toxicity data but may also contain information on exposure, environmental persistence, or actions being taken to reduce human health and environmental risks. It is an important information-gathering tool that serves as an early warning mechanism;

• Focus Database: Rationale for decisions emerging from Focus meeting, including decisions on whether or not to drop chemicals from further review.

Measurement results are calculated on a fiscal-year basis and draw on relevant information received over the 12-month fiscal year.

Data Source: The Office of Pollution Prevention and Toxics (OPPT) is responsible for the implementation of the TSCA. The office will compare data submitted under TSCA Section 8(e) with previously-submitted new chemical review data (submitted under TSCA Section 5 and contained in the PMN). This comparison will determine the number of instances in which EPA's current PMN review practices would have failed to prevent the introduction of new chemicals or microorganisms into commerce which pose an unreasonable risk to workers, consumers or the environment. Inconsistencies between the 8(e) and previously-submitted new chemical review data will be evaluated by applying the methods and steps outlined below to determine whether the inconsistencies signify an "unreasonable risk."

Methods and Assumptions: EPA's methods for implementing this measure involve determining whether EPA's current PMN review practices would have failed to prevent the introduction of chemicals or microorganisms into commerce that pose an unreasonable risk to workers, consumers or the environment, based on comparisons of 8(e) and previously-submitted new chemical review data. The "unreasonable risk" determination is based on consideration of (1) the magnitude of risks identified by EPA, (2) limitations on risk that result from specific safeguards applied, and (3) the benefits to industry and the public expected to be provided by the new chemical substance. In considering risk, EPA looks at anticipated environmental effects, distribution and fate of the chemical substance in the environment, patterns of use, expected degree of exposure, the use of protective equipment and engineering controls, and other factors that affect or mitigate risk. The following are the steps OPPT will follow in comparing the 8(e) data with the previously-submitted new chemical review data:

1. Match all 8(e) submissions in the 8(e) database with associated TSCA Section 5 notices. TSCA Section 5 requires manufacturers to give EPA a 90-day advance notice (via a pre-manufacture notice or PMN) of their intent to manufacture and/or import a new chemical. The PMN includes information such as specific chemistry identity, use, anticipated production volume, exposure and release information, and existing available test data. The information is reviewed through the New Chemicals Program to determine whether action is needed to prohibit or limit manufacturing, processing, or use of a chemical.
2. Characterize the resulting 8(e) submissions based on the PMN review phase. For example, were the 8(e) submissions were received: a) before the PMN notice was received by EPA, b) during the PMN review process, or c) after the PMN review was completed?
3. Review of 8(e) data focusing on 8(e)s received after the PMN review period was completed.
4. Compare hazard evaluation developed during PMN review with the associated 8(e) submission.
5. Report on the accuracy of the initial hazard determination.
6. Revise risk assessment to determine if there was an unreasonable risk based on established risk assessment and risk management guidelines and whether current PMN Review practices would have detected and prevented that risk.

Suitability: The databases used and the information retrieved are directly applicable to this measurement and therefore suitable for measurement purposes. This measure supports the New

Chemical program's goal to ensure that new chemicals introduced into commerce do not pose unreasonable risks to workers, consumers, or the environment. This measure provides a suitable year to year comparison against this goal because supporting data and analysis are conducted on an annual basis, directly linking to this long-term goal.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003) and will ensure that those standards and procedures are applied to this effort.

Data Quality Reviews: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight. In addition, the National Pollution Prevention and Toxics Advisory Council (NPPTAC), which consists of external experts providing independent review and direction to OPPT, has provided comment on this measure.

Data Limitations: There are some limitations of EPA's review which result from differences in the quality and completeness of 8(e) data provided by industry; for example, OPPT cannot evaluate submissions that do not contain adequate information on chemical identity. The review is also affected in some cases by a lack of available electronic information. In particular the pre-1996 PMN cases are only retrievable in hard copy and may have to be requested from the Federal Document Storage Center. This may introduce some delays to the review process.

Error Estimate: Not applicable. This measure does not require inferences from statistical samples and therefore there is no estimate of statistical error. OPPT will review all 8(e) submissions received in the year with corresponding previously-submitted new chemical review data, and not a sample of such submissions.

New/Improved Data or Systems: OPPT is currently developing the integrated, electronic Manage Toxic Substances (MTS) system that will provide real time access to prospective PMN review.

References: OPPT New Chemicals Program
http://www.epa.gov/opptintr/newchems/, TSCA Section 8(e) – Substantial Risk
"Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003.

FY 2009 Performance Measures:

- **Percent reduction from baseline year in average cost of TSCA Section 8(e) processing and searches. [PART efficiency measure]**
- **Percent reduction from baseline year in cost of managing PMN submissions through the Focus meeting as a percentage of baseline year cost. [PART efficiency measure]**

Performance Databases: EPA will rely on several principal databases to facilitate implementation of the TSCA Section 8(e) and new chemical submission efficiency measures:

- Confidential Business Information Tracking System (CBITS): CBITS allows users to access basic identifying and status information on each hard copy 8(e) notification and new chemical submission to EPA, track receipt of each hard copy submission as well as requests for copies of submissions or information therein, and to obtain data on number of hard copy submissions and requests for copies per fiscal year. CBITS is a paper system which will eventually be phased out in favor of MTS database (see below).
- Manage Toxic Substances (MTS) database: This is a new system that, when applied to 8(e) notifications and new chemical submissions in FY 2008, will enable users to receive, process, and store electronic submissions of 8(e) notifications and new chemical submissions information, and accommodate subsequent searches and retrievals performed by EPA or contractor staff. The system will provide data on the number of electronic submissions per fiscal year and the number of searches and retrievals conducted electronically by accessing scanned documents.

Data Sources: The sources of data for this performance measure are the 8(e) notifications and new chemical submissions and the information summarized in the databases described above. No external data sources play a direct role in the calculation of measurement results, although the 8(e) notifications often make reference to external data sources in which the reported 8(e) information originally appeared.

Methods and Assumptions: The efficiency measure "Average cost of TSCA Section 8(e) processing and searches" is calculated by: (1) defining the baseline year (FY 2007) and developing baseline information expressed as the average time required to conduct 8(e) processing and searches in the baseline year; (2) converting average time to average cost measurements; (3) setting appropriate targets for outyears, reflecting increasing levels of efficiency; and (4) conducting actual measurements for fiscal years beginning with FY 2009, after electronic submissions, processing and searches begin. These steps can be summarized individually as follows:

(1) Obtain baseline data: FY 2007 baseline data were obtained for each of five distinct sub-measures that are combined additively to produce the single efficiency measure described here. These sub-measures and the associated average handling times for 8(e)'s are: (a) average time spent sorting mail for 8(e)'s in the Confidential Business Information Center (CBIC) – 5 minutes per 8(e); (b) average time spent processing 8(e)'s in the CBIC – 10 minutes per 8(e); (c) average time searching the CBITS and/or MTS databases – 20 minutes per 8(e); (d) average time spent retrieving 8(e)'s from the CBIC – 25 minutes per 8(e); and (e) average time spent retrieving 8(e)'s off the shelf and replacing them – 2 minutes per 8(e). Collectively, these sub-measures represent the complete activity profile for 8(e) processing and searches. The time estimates are based on interviews with key staff conducted by the program.

(2) Convert average time baseline to average cost: For sub-measures that describe tasks performed by EPA staff, average time estimates have been converted to average cost by taking the standard hourly rate for a biologist at grade 14, step 1; dividing by 60 to express the hourly rate in minutes; and multiplying the result by the average time estimate (in minutes), yielding the average cost per 8(e). Similar calculations are

performed for sub-measures that describe contractor tasks, except that the hourly rate is obtained from actual experience under the applicable contract.

(3) Set targets for fiscal years: The gradual expansion of electronic reporting and scanning is the main factor driving the targeted improvement in the measure. Target setting is based on what is considered reasonable and achievable. Targets are expressed, preliminarily, as the expected percentage increase in electronic submissions or scanned 8(e)s from the baseline fiscal year and the amount of time required for handling of such materials.

(4) Conduct measurements: The final step in the measurement process is to perform the actual measurements for specific fiscal years. This is done by consulting the databases described earlier to determine the actual proportion of submissions and searches/retrievals that are electronic and the proportion that are non-electronic, and inserting these data into the appropriate average cost formula. For instance, with respect to the average sorting time measure, one substitutes the actual proportion of non-electronic submissions for the target of .95 and the actual proportion of electronic submissions for the target of .05, leaving all other numbers in the formula the same.

There are a number of facts and assumptions underlying the preceding methodology: (a) Baseline 8(e) submissions and searches are all conducted non-electronically; (b) The overall number of submissions and search requests will remain static over the three-year period; (c) Possible increases in contractor and EPA staff costs are disregarded; and (d) for the average time searching CBITS/MTS sub-measure, the cost of electronic searches is proportional to search time (i.e., 20 minutes / 5 minutes = baseline cost divided by 4 = $12.40/4 = $3.10). For the other sub-measures, the average time and average cost are zero. Note: Item (a) can be considered a fact, while items (b)-(d) are assumptions.

The calculation is the nearly the same for new chemical submissions. Just substitute "new chemical submissions" for "8(e)" above. The sub-measures and the associated average handling times for new chemical submissions are slightly modified. They are: (a) average time spent sorting and processing mail for new chemical submissions in the Confidential Business Information Center (CBIC) – 35 minutes per new chemical submission; and (b) average time searching and retrieving new chemical submissions – 45 minutes per new chemical submission. Collectively, these sub-measures represent the complete activity profile for new chemical submission processing and searches. The time estimates are based on interviews with key staff conducted by the program.

The performance measures are suitable efficiency measures because average cost takes into account all expenses involved. The sub-measures exhaust all activities which contribute to process and the associated costs. The data collected and analyzed represent the costs of 8(e) and new chemical processing and are the most acceptable data available for this measure. All data meet the QMP requirements and outcomes are reviewed by OPPT senior management.

Suitability: The indicators selected are suitable and appropriate because they reflect expected cost savings stemming from automation of the new chemical submission and 8(e) notification and review process. This represents EPA's progress toward its goal of improving program efficiency.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and will ensure that those standards and procedures are applied to this effort.

Data Quality Review: Information developed in the course of measurement will be presented to senior management within OPPT to address potential concerns related to technical outcomes and to provide quality oversight.

Data Limitations: No specific data limitations have been identified with respect to the information relied upon in developing or reporting these measures.

Error Estimate: Not applicable. The measures do not require inferences from statistical samples and therefore there is no estimate of statistical error.

New/Improved Data or Systems: As mentioned above, the development and deployment of the new MITS (Manage Toxic Substances) database will enable users to track electronic submissions and handling of 8(e) and new chemical information. The system will provide data on the number of electronic submissions per fiscal year and the number of searches and retrievals conducted electronically by accessing scanned documents.

References: http://www.epa.gov/opptintr/tsca8e/

FY 2009 Performance Measures:

- **Cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization Reports completed [PART measure]**
- **Cumulative number of High Production Volume (HPV) chemicals with Risk-Based Decisions completed [PART measure]**

Performance Database: EPA uses a reporting spreadsheet called "Hazard Score and Data Gaps for High Production Volume (HPV) Chemicals to track the number of completed Screening Level Hazard Characterization Reports. The spreadsheet is located on the Office of Pollution Prevention and Toxics (OPPT) secure Local Area Network (LAN) drive (G:\HPV Hazard Characterization), with the working copy located on the Branch Chief's desktop. EPA uses a reporting spreadsheet called "Risk-Based Decisions for High Production Volume (HPV) Chemicals" to track the number of completed Risk Based Decisions and other developed products besides the Hazard Characterizations described above that contribute to those decisions, such as Fate Characterizations, Exposure Characterizations, and Risk Characterizations. The entire process associated with tracking chemicals through the Security and Prosperity Partnership (SPP) is also tracked through the High Production Volume Information System (HPVIS) database.

Data Source: The Screening Level Hazard Characterization Reports are completed by EPA staff based on submissions from chemical sponsors, and are completed for both U.S. HPVs and

international Screening Information Data Set (SIDS) chemicals. Each screening level hazard characterization document represents a thorough review by qualified EPA personnel of the information provided by the submitter. Once a report is completed, as determined by senior scientist and management review, the spreadsheet is updated with the chemical name and date of completion. Screening Level Hazard Characterization Reports are combined with Exposure and Fate Characterizations based on information received from industry through the TSCA Inventory Update (IUR), leading to development of Risk Characterizations for each chemical. Division Directors within OPPT look holistically at this information and make a Risk-Based Recommendation. A Risk-Based Decision is then made by the OPPT Office Director and this integrated product is made publicly available through the HPV Program website and through HPVIS.

Methods and Assumptions: Hazard characterizations contribute to the Agency's ability to make Risk Based Decisions for HPV chemicals. The measures count the number of completed Hazard Characterization products (reports) at the time they are forwarded from the Risk Assessment Division to the Chemical Control Division, and the number of associated Risk-Based Decisions, measured at the time that the Office Director's decision is made final. Public posting of the Risk-Based Decision occurs approximately 2-4 weeks following decision finalization.

Suitability: Both of these measures are direct output measures of the Chemical Risk Review and Reduction program. These output measures support the outcome goal of reducing risk from HPV chemicals and are suitable for year to year as well as quarter to quarter comparisons. Hazard screening is an important first step in reducing risk and Risk-Based Decisions form the primary basis for taking action to reduce risk and improve human health.

QA/QC Procedures: All Pollution Prevention and Toxics programs operate under the Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines, last accessed on August 28th, 2006, and under the Pollution Prevention and Toxics Quality Management Plan (QMP) ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003) and the program will ensure that those standards and procedures are applied to this effort. Specifically, each Screening Level Hazard Characterization Report is reviewed by a senior staffer in the HPV program, the Branch Chief and the Division Director. The same review is applied to the count of cumulative Screening Level Hazard Characterization Reports completed.

Data Quality Reviews: Recent GAO reviews found that EPA does not routinely assess the risks of all existing chemicals and faces challenges in obtaining the information necessary to do so. EPA has taken several steps to respond to these reviews including successful implementation of a process to routinely assess risks of existing chemicals. Data submissions have been received for 1,357 (97%) out of the 1,401 chemicals sponsored directly in the HPV Challenge Program. EPA scientists are currently utilizing the data to review HPV chemicals and develop screening-level Hazard Characterizations (HC). The screening-level HCs will be combined with Exposure Characterizations to create Screening–level Risk Characterizations, which will summarize any potential risks, identify scientific issues, and ensure transparency and risk communication. For

chemicals of concern, voluntary and regulatory Risk-Based Decisions will then be implemented to achieve effective risk management.

Data Limitations: None.

Error Estimate: Not applicable. No models, assumptions or statistical methods are applied.

New/Improved Data or Systems: A content page is available for posting the Screening Level Hazard Characterization Reports publicly on EPA's HPV website http://iaspub.epa.gov/oppthpv/hpv_hc_characterization.get_report. A content page is under development for posting Risk Based Decisions publicly on EPA's HPV website. This website will post Risk-Based Decisions as an integrated product of Hazard, exposure and fate characterizations, which form the basis of the decision making process. The site will allow for review of the all products leading to the Risk-Based Decisions by the chemical sponsors and other interested parties and will contain instructions for submitting comments on the reports or underlying data. The comments will also be posted.

References:

"Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances;" June 2003.

GAO-05-458: Chemical Regulation: Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program, June 2005

GAO-06-1032T: Chemical Regulation: Actions Are Needed to Improve the Effectiveness of EPA's Chemical Review Program, August 2006

FY 2009 Performance Measure:

- **Number of risk management plan audits and inspections completed**

Performance Database: The EPA Annual Commitment System (ACS) is the database for the number of risk management plan audits.

Data Source: OSWER's Office of Emergency Management implements the Risk Management Program under Clean Air Act section 112(r). Facilities are required to prepare Risk Management Plans (RMPs) and submit them to EPA. In turn, EPA Headquarters (HQ) provides appropriate data to each Region and delegated State so that they have the RMP data for their geographical area. The Regions and delegated States conduct audits. About ten States have received delegation to operate the RMP program. These delegated States report audit numbers to the appropriate EPA Regional office so it can maintain composite information on RMP audits.

Methods, Assumptions and Suitability: Regions enter data into the Agency's Annual Commitment System. HQ prepares an annual report. Data are count data and not open to interpretation.

QA/QC Procedures: Data are collected from states by EPA's Regional offices, and reviewed at the time of Regional data entry. Data are regularly compared to similar data from the past to identify potential errors.

Data Quality Review: Data quality is evaluated by both Regional and Headquarters' personnel.

Data Limitations: Data quality is dependent on completeness and accuracy of the data provided by state programs and the EPA Regional offices.

Error Estimate: Not calculated.

New/Improved Data or Systems: N/A

Reference: N/A

FY 2009 Performance Measure:

- **Number of countries completing phase out of leaded gasoline**
- **Number of countries introducing low sulfur in fuels**

Performance Database: UNEP Partnership Clearinghouse; This performance measure tracks the number of countries that have phased out lead in gasoline. EPA works with the United Nations Environment Programme (UNEP) and other partners in the global Partnership for Clean Fuels and Vehicles to document the phase out of leaded gasoline and the reduction of sulfur levels in fuels worldwide. UNEP manages the Partnership Clearinghouse, which tracks the status of lead phase-out efforts and the status of sulfur reduction efforts in each country. The Partnership Clearinghouse also documents and verifies each country's implementation of lead phase out and sulfur reduction programs. The Partnership's data on lead phase-out can be found on the Partnership website at: http://www.unep.org/PCFV/Data/data.htm#leaded. The Partnership's data on sulfur levels in fuels, by country, can be found on the Partnership website at: http://www.unep.org/PCFV/Data/data.htm#sulphur

Data Source: The United Nations Environment Programme serves as the Clearinghouse for the Partnership for Clean Fuels and Vehicles and maintains a database of the status of country lead-phase out. Information from the database is posted on the Partnership website and updated periodically by UNEP -- at least every 6 months. UNEP collects the data from public and private sector partners and contacts government and industry experts in each country for verification before the data are posted. This data collection and cross-checking provide the best currently available information on country lead phase-out status and levels of sulfur.

Methods, Assumptions and Suitability: There is currently no available database on international leaded gasoline sales data or market penetration of alternative fuels, nor is there any international database on sulfur levels in fuels. Because of this gap, the Partnership made the decision to track the number of countries that have phased out lead and reduced sulfur because the data are more easily verifiable.

QA/QC Procedures: Experts at the Partnership for Clean Fuels and Vehicles verify the information in the Partnership Clearinghouse by contacting key people from industry and government within each country.

Data Quality Reviews: N/A

Data Limitations: There currently is no available database on leaded gasoline sales data or market penetration of alternative fuels. The Partnership made the decision to track the number of countries that have phased out lead and reduced sulfur in fuels, because the data are more easily verifiable. Fuel changes and lead phase- out are implemented in different ways in different countries, mostly by legislation. But having the legislation in place does not mean that lead has been eliminated from gasoline. Many countries have set dates for lead phase-out and sulfur reduction; however the Partnership tracks actual progress toward implementation.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: For additional information on the Partnership for Clean Fuels and Vehicles, see the Partnership website at http://www.unep.org/PCFV

For more information concerning the database for phase-out of leaded gasoline, see http://www.unep.org/PCFV/Data/data.htm#leaded

For additional information on sulfur levels, see
http://www.unep.org/PCFV/Data/data.htm#sulphur

GOAL 4 OBJECTIVE 2

FY 2009 Performance Measures:

- Number of Brownfields properties assessed [PART performance measure]
- Number of properties cleaned up using Brownfields funding
- Number of jobs leveraged from Brownfields activities
- Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields properties. [PART performance measure]
- Acres of Brownfields made ready for reuse [PART performance measure]

Performance Database: The Assessment Cleanup and Redevelopment Exchange System (ACRES) tracks the performance information for the above measures.

Key fields related to performance measures include, but are not limited to:

Property Acreage
Assessment Completion Date

Cleanup Required
Cleanup Completion Date
Funding Leveraged
Jobs Leveraged

Performance measure data is tracked by fiscal year and will not be available for the FY 2009 PAR; data will be available for the FY 2010 PAR.

Data Source: Data are extracted from quarterly reports and property profile forms (http://www.epa.gov/brownfields/pubs/rptforms.htm) prepared by assessment, cleanup, revolving loan fund (RLF), job training, and State and Tribal 128 Voluntary Response Program cooperative agreement award recipients. Information on Targeted Brownfields Assessments is collected from EPA Regions.

Methods, Assumptions and Sustainability: Cooperative agreement recipients report performance data in quarterly reports and property profile forms. Data are reviewed by Regional EPA grant managers to verify activities and accomplishments. Given the reporting cycle and the data entry/QA period, there is typically a six month data lag for ACRES data.

Note that accomplishments reported by Brownfields Assessment Grantees, Brownfields Cleanup Grantees, Brownfields Revolving Loan Fund Grantees, Brownfields Job Training Grantees, Regional Targeted Brownfields Assessments, and State and Tribal 128 Voluntary Response Program Grantees all contribute towards these performance measures. "Number of Brownfields properties assessed" is an aggregate of assessments completed with Assessment Grant funding, Regional Targeted Brownfields Assessment funding, and State and Tribal 128 Voluntary Response Program funding. "Number of Brownfields properties cleaned up" is an aggregate of properties cleaned up by RLF Grantees, Cleanup Grantees, and State and Tribal 128 Voluntary Response Program Grantees. "Number of Acres Made Ready for Reuse" is an aggregate of acreage assessed that does not require cleanup and acreage cleaned up as reported by Assessment Grantees, Regional Targeted Brownfields Assessments, Cleanup Grantees, RLF Grantees, and State and Tribal 128 Voluntary Response Program Grantees. "Number of cleanup and redevelopment jobs leveraged" is the aggregate of jobs leveraged by Assessment, Cleanup and RLF Grantees. "Amount of cleanup and redevelopment funds leveraged at Brownfields properties" is the aggregate of funds leveraged by Assessment, Cleanup and RLF Grantees.

QA/QC Procedures: Data reported by cooperative award agreement recipients are reviewed by EPA Regional grant managers for accuracy and to ensure appropriate interpretation of performance measure definitions. Reports are produced monthly with detailed data trends analysis.

Data Quality Reviews: No external reviews.

Data Limitations: All data provided voluntarily by grantees.

Error Estimate: NA

New/Improved Data or Systems: The Brownfields Program updated the Property Profile Form in FY 2006 to improve data collection and to expand the community of grantees completing the form. The Program launched and phased in an online reporting form in FY 2007.

References: For more information on the Brownfields program, see *Investing in Partnership, Possibility and People: A Report to Stakeholders from the US EPA Brownfields Program* (http://www.epa.gov/brownfields/news/stake_report.htm); assessment demonstration pilots and grants (http://www.epa.gov/brownfields/assessment_grants.htm); cleanup and revolving loan fund pilots and grants (http://www.epa.gov/brownfields/rlflst.htm); job training pilots and grants (http://www.epa.gov/brownfields/job.htm); and cleanup grants (http://www.epa.gov/brownfields/cleanup_grants.htm).

FY 2009 Performance Measure:

- Number of communities with potential environmental justice concerns that achieve significant measurable environmental and/or public health improvement through collaborative problem-solving strategies.

Performance Database: The Environmental Justice (EJ) Collaborative Problem-Solving (CPS) Cooperative Agreement (CA) Program within the Office of Environmental Justice (OEJ) established and maintains the "EJ CPS CA Performance Tracking Database" in *Lotus Notes* to support the above program performance measure. The purpose of the program is to fund individual projects that each employ CPS strategies to improve environmental and/or public health in a specified community with environmental justice concerns. The database consists of specific information and data that are gathered from individual project files and entered by OEJ project officers who are assigned to one or more individual projects. To determine progress toward the above-stated program performance measure, OEJ periodically evaluates the information and data in the database and project files for completed projects using the consistent program procedures described below. Each completed project has the potential to be counted as one community that meets the program performance measure.

Data Source: The main sources of data for this program performance measure are semi-annual reports that are submitted to OEJ project officers by the recipients of EPA CPS CA projects. Each OEJ project officer enters data and information from these reports into the above-mentioned database. The most important type of data in the semi-annual reports are current values for one or more performance measures that are each associated with a project-specific performance goal and baseline. The units of these measured values, as well as the goals and baselines have been evaluated to determine if they are appropriate, reasonable, realistic and will ensure a strong logical linkage with the above-mentioned CPS CA program performance measure. As described below, the logical linkages are designed to ensure that the attainment of the project-specific goals for a given project serves as a reliable basis for concluding that the community named in the project has achieved "significant measurable environmental and/or public health improvement through collaborative problem-solving strategies."

Methods, Assumptions and Suitability: The projects in the EJ CPS CA program are awarded through a competitive review process in which applications are received in response to periodic

requests for applications (RFAs). Each award recipient generally is a community-based organization that provides a project manager who reports to an OEJ project officer. The RFAs instruct applicants to define the specific potential environmental justice concern that their project proposes to address, and also instructs them to provide the outputs, outcomes, performance goals, and performance measures that are expected from their project. The process for evaluating these applications is guided by a published evaluation criteria and consensus among reviewers as to whether a given applicant has proposed a strong strategy that will "achieve significant measureable environmental and/or public health improvements through collaborative problem solving," as required by the above-listed program performance measure. After the projects are selected for award, each OEJ project officer works with the project manager in the awardees' organization to refine a priority list of outputs, performance measures and goals, and baseline measures that must be tracked at least monthly throughout the life of the project. These lists also are used to prepare the templates for the semi-annual progress reports, which are the primary sources of data for the program performance measure, as described in the previous section. In working with the project manager to establish these lists, each OEJ project officer uses program guidance to ensure that the performance measures, performance goals, and baseline measures for the project are appropriate, reasonable, and realistic, and are consistent with OEJ procedures for determining when the project has met the program performance measure stated above. In addition, each OEJ project officer follows OEJ guidance to ensure that project performance measures and goals are being tracked accordingly throughout the life of the project. The units of measurement for the project-specific goals, measures, and baselines often vary between different projects depending on the types of community improvements being pursued by each project. However, the structure of the CPS CA program enables the OEJ project officers to coordinate with each other and with their respective CPS CA project manager to ensure the establishment of similar project goals between projects that are addressing similar types of environmental and/or public health improvements in their communities. The lists of indicators selected for each community vary due to the unique nature of the improvements the communities are trying to make. Examples of the types of improvements include but are not limited to:

- Increased coordination between healthcare providers and local government service organizations, and
- Reductions in exposures of community residents to:
  - Contaminated groundwater in their private wells,
  - Household toxins (such as asthma triggers and lead),
  - Workplace toxins (such products used in nail salons and floor-finishing businesses)
  - Emissions from nearby hog farm operations
  - Diesel emissions from nearby trucking operations.

Some of the key measures used to track these improvements include, but are not limited to numbers of:

- Patients newly referred to a specific government service organization by project-trained healthcare workers
- Participants completing a specific training on how to reduce their exposure to toxins
- Participants who commit to making one or more behavior changes
- Participants observed to have made one or more behavior changes
- Households with reduced exposures

- Business owners who commit to one or more specific behavior changes, such as modifying their operations to reduce releases of pollutants
- New regulations, ordinances, or laws resulting from project activities

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: (1) Report specifications for each project detailing how reported data are collected and calculated, and (2) approved Quality Assurance Project Plans (QAPP) for projects involving the collection of primary or secondary environmental data.

Data Quality Review: The Office of Environmental Justice performs an annual review of each project to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: The first round of collaborative problem-solving projects was not structured to capture baseline information and some detailed performance measure data. However, the files for these projects contain information and data that can be used in concert with OEJ guidance to make determinations as to whether the results of each of these projects meet the program performance measure by achieving "significant measureable improvement" in their respective communities.

Error Estimate: NA

New/Improved Data or Systems: The CPS Program revised the solicitation to improve data collection. Awards made in FY 2007 are structured to capture baseline information and more detailed performance measure data. This change will be reflected over the next several years.

References: For more information on collaborative problem-solving see *EPA's Environmental Justice Collaborative Problem-Solving Model.*
(http://www.epa.gov/compliance/resources/publications/ej/grants/cps-manual-12-27-06.pdf)

FY 2009 Performance Measures:

- **Additional people served per million dollars (US and Mexico federal expenditures) [PART efficiency measure]**
- **Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003 [PART annual measure]**
- **Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003 [PART annual measure]**

Performance Database: No formal EPA database. Performance is tracked and reported quarterly by the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank). Data fields are population served by and homes connected to potable water and wastewater collection and treatment systems.

Data Source: Data sources include U.S. population figures from the 2000 U.S. Census to establish the baseline, data on U.S. and Mexican populations served and homes connected by "certified" water/wastewater treatment improvements from the BECC and data on projects funded from the NADBank.

Methods, Assumptions and Suitability: Summation of population from BECC and NADBank.

QA/QC Procedures: EPA Headquarters is responsible for evaluation of reports from BECC and NADBank on drinking water and wastewater sanitation projects. 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 Quality Reviews: 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.

Error Estimate: The error estimate is the same rate accepted by the U.S. Census.

New/Improved Data or Systems: None.

References:

U.S. Department of Commerce, Bureau of the Census, (Washington, DC: U.S. Department of Commerce, 1990). *Instituto Nacional de Estadistica, Geografia y Informatica, Aguascalientes*, Total Population by State (1990).

Border Environment Cooperation Commission (BECC), Cd Juarez, Chih, and North American Development Bank (NADBank), (San Antonio, TX, 2002).

GOAL 4 OBJECTIVE 3

FY 2009 Performance Measures:

- **Acres of habitat protected or restored in National Estuary Program (NEP) study areas [PART annual measure]**
- **Program dollars per acre of habitat protected or restored [PART annual efficiency measure]**

Performance Database: The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The key field used to calculate annual performance is habitat acreage. Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Information regarding habitat protection is accessible on a web page that highlights habitat loss/alteration, as well as the number of acres protected and restored by habitat type http://www.epa.gov/owow/estuaries/pivot/overview/intro.htm. This allows 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.

Data Source: NEP documents such as annual work plans, which report on NEP achievements during the previous year, annual progress reports, and other implementation tracking materials are used to document the number of acres of habitat restored and protected. EPA aggregates the data provided by each NEP to arrive at a national total for the entire Program. EPA is confident that the data presented are as accurate as possible. Each NEP reviews the information prior to reporting to EPA. In addition, EPA conducts regular reviews of NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: There is not necessarily a direct correlation between the number of habitat acres restored and protected and ecosystem health, nor are habitat quantity or quality the only indicators of ecosystem health. But, habitat acreage is an important measure of on-the-ground progress made toward meeting the EPA annual goal of protecting and restoring habitat in NEP study areas. EPA has defined and provided examples of Aprotection@ and Arestoration@ activities for purposes of tracking and reporting measures (see citation for the PIVOT website in references below.) "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include creation of habitat, , acquisition of areas for the purpose of protection, conservation easements and deed restrictions, efforts resulting in increased submerged aquatic vegetation coverage, permanent shellfish bed openings, and efforts resulting in increased anadromous fish habitat.

The NEP "Habitat Acres Protected or Restored" efficiency measure is calculated by dividing the total ocean and coastal protection program dollars by the total NEP acres protected or restored. The measure is based on habitat data collected by the NEPs as described above and reported in the annual habitat measure, and the total amount of program dollars. That amount is: (1) the sum of the NEP/Coastal budget (including the additional funds for Long Island Sound), (2) the Marine Pollution budget, and (3) the program match as reported by the NEPs.

QA/QC Procedures: Primary data are 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). The NEP staff are requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA then confirms that the national total accurately reflects the information submitted by each program. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews conducted yet.

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, the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting); rather, the acreage is one measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where projects are located in each NEP study area. Not only does this assist both the individual NEP and EPA in obtaining a sense of geographic project coverage, but it provides a basis from which to begin exploring cases where acreage may be double-counted by different agencies. An on-line reporting system—NEPORT--has been developed for the NEPs= use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: Aggregate national and regional data for this measurement, as well as data submitted by the individual National Estuary Programs, is displayed numerically, graphically, and by habitat type in the Performance Indicators Visualization and Outreach Tool (PIVOT). PIVOT data are publicly available at http://www.epa.gov/owow/estuaries/pivot/overview/intro.htm. The Office of Water Quality Management Plan (July 2002) is available on the Intranet at http://intranet.epa.gov/ow/informationresources/quality/qualitymanage.html

FY 2009 Performance Measure:

- **Restore or protect acres of coastal habitat including tidal wetlands, dunes, riparian buffers, and freshwater wetlands. [Long Island Sound]**

Performance Database: The Office of Wetlands Oceans and Watersheds (OWOW) has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The key field used to calculate annual performance is habitat acreage. Annual results have been reported since 2000 for the National Estuary Program (NEP) (results are calculated on a fiscal year basis). The EPA Long Island Sound Office (LISO) requires the states of New York and Connecticut, which are Long Island Sound Study Management Conference partners, to collect and report acres of habitat restored and protected as required by the NEP. The states use internal project tracking systems to gather, summarize and report restoration and protection data to LISO, which, in turn, enters the data into the OWOW habitat information system.

Data Source: NEP documents such as annual work plans (which contain achievements made in the previous year), annual progress reports and other implementation tracking materials, are used to document the number of acres of habitat restored and protected. EPA is confident that the data presented are as accurate as possible. The EPA Long Island Sound Office (LISO) reviews the information prior to reporting. In addition, EPA LISO conducts regular reviews of state habitat restoration work to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported -—or of the estuary overall, but it is a suitable measure of on-the-ground progress. Habitat acreage does not necessarily correspond one-to-one with habitat quality, nor does habitat (quantity or quality) represent the only indicator of ecosystem health. Nevertheless, habitat acreage serves as an important surrogate and a measure of on-the-ground progress made toward EPA=s annual performance goal of habitat protection and restoration for LIS. EPA has defined and provided examples of Aprotection@ and Arestoration@ activities for purposes of measure tracking and reporting (see citation for the PIVOT website in references below.) "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include created areas, protected areas resulting from acquisition, conservation easement or deed restriction, submerged aquatic vegetation coverage increases, permanent shellfish bed openings, and anadromous fish habitat increases.

QA/QC Procedures: Primary data are prepared by the state and federal staff of the LISS Habitat Restoration Team 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). The LISS staff are requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews conducted yet.

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 restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting), but is rather a measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: The LISS is developing a new data system to report and track habitat restoration data from the LISS. This will include latitude and longitude data (where possible) for each project. These data would be mapped to highlight where these projects are located in the LISS study area. This system is expected to be developed over the next several federal fiscal years. An on-line reporting system—NEPORT-- has been developed for the NEPs= use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: See V&V for National Estuary Program for PIVOT and NEPORT.

Results of Long Island Sound habitat restoration efforts are documented in the biennial reports, *Sound Health*, and *Protection and Progress*, and the annual LISS Comprehensive Conservation and Management Plan Implementation Tracking Report, available at: http://www.longislandsoundstudy.net/publications.htm#reports.

FY 2009 Performance Measure:

- **Reduce point source nitrogen discharges to the Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL).**

Performance Database: The Permit Compliance System, (PCS) tracks permit compliance and enforcement data for sources permitted under the Clean Water Act National Pollutant Discharge Elimination System (NPDES). Data in PCS include: major permittee self-reported data contained in Discharge Monitoring Reports (DMR); data on permittee compliance status; data on state and EPA inspection and enforcement response. The states of Connecticut and New York are required, as part of their delegated NPDES permit programs, to periodically monitor and test effluent for appropriate pollutants, including nitrogen, complete DMRs and enter this information into PCS.

Data Source: Permittee self-reported DMR data are entered into PCS by state offices, which are delegated to implement the NPDES program. PCS automatically compares the entered DMR data with the pollutant limit parameters specified in the facility NPDES permit. This automated process identifies those facilities which have emitted effluent in excess of permitted levels. Facilities are designated as being in Significant Noncompliance (SNC) when reported effluent exceedances are 20% or more above permitted levels for toxic pollutants and/or 40% or more above permitted levels of conventional pollutants. PCS contains additional data obtained through reports and on-site inspections, which are used to determine SNC, including: non-effluent limit violations such as unauthorized bypasses; unpermitted discharges; and pass through of pollutants which cause water quality or health problems; permit schedule violations; non-submission of DMRs; submission of DMRs 30 or more days late; and violation of state or federal enforcement orders.

Methods, Assumptions and Suitability: There are established computer algorithms to compare DMR effluent data against permitted effluent levels. The algorithms also calculate the degree of permitted effluent exceedance to determine whether toxic/conventional pollutant SNC thresholds have been reached. Nitrogen waste load allocations (WLA) are specified in the December 2000 *A Total Maximum Daily Load (TMDL) Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* that was prepared by the states of New York and Connecticut and approved by EPA in conformance with Section 303(d) of the Clean Water Act. The TMDL nitrogen WLAs are included in the NPDES (state-delegated) permits issued by the states for dischargers to Long Island Sound.

QA/QC Procedures: State offices have documentation of the design, construction and maintenance of the databases used for the performance measures, showing they conform to EPA's PCS standards for point source data. Quality Assurance/Quality Control procedures are in place for PCS data entry. State and Regional PCS data entry staff are required to take PCS

training courses. Quality Management Plans (QMPs) are prepared for each Office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance (OC) has established extensive processes for ensuring timely input, review and certification of PCS information. OC=s QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008.

Data Quality Review: Information contained in PCS is required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. SNC data in PCS are reviewed quarterly.

Data Limitations: Legal requirements for permittees to self-report data on compliance with effluent parameters in permits generally results in consistent data quality and accuracy. EPA monitors and measures the timeliness of DMR submissions and data entry quality. National trends over the past several years show an average of 94% of DMRs is entered timely and complete. Where data entry problems are observed, OECA works directly with regions and states to improve performance, and in limited circumstances has dedicated supplemental grant resources to help regions and states correct problems. As part of ICIS-NPDES implementation OECA is working to deploy an electronic DMR process to save resources on data entry workload and reduce data input errors.

Error Estimate: There may be errors of omission, misclassification, incorrect georeferencing, misdocumentation or mistakes in the processing of data.

New & Improved Data or Systems: PCS was developed during the 1980's and has undergone periodic revision and upgrade since then. OECA is currently developing a modernized data system to replace PCS, utilizing modern data entry, storage, and analytical approaches. The replacement of PCS with ICIS-NPDES (Integrated Compliance Information System – NPDES), a modernized and user-friendly NPDES data system, began in June 2006 when eleven states began using the system; seven other states will be migrated to the new system in August, 2007. During phased implementation of ICIS-NPDES across the states a combination of PCS and ICIS-NPDES will be used to generate SNC data. Once fully implemented, ICIS-NPDES will be the sole source of NPDES SNC data.

References:
Nitrogen TMDL: http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325604&depNav_GID=1654
http://www.longislandsoundstudy.net/publications.htm#reports

FY 2009 Performance Measure:

- **Reopen miles of river and stream corridor to anadromous fish passage through removal of dams and barriers or installations of by-pass structures such as fishways. [Long Island Sound]**

Performance Database: A publicly accessible web-based database is under development by the Long Island Sound Study (LISS) to track this measure. Currently, the Connecticut Department of Environmental Protection and the New York State Department of

Environmental Conservation track and report fish passage projects and the additional miles of river and stream corridors reopened as a result. The states submit these data to the EPA Long Island Sound Office, which is one of the goals of the LISS.

Data Source: The Long Island Sound Study has established a Habitat Restoration Team (HRT) comprised of federal, state, and local agency staff and private organizations. Public/Private projects to reopen river and stream corridors to fish passage are tracked by the work group coordinators (staff in the states of Connecticut and New York). In addition, the EPA Long Island Sound Office conducts regular reviews of state habitat restoration work to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved. Long Island Sound Study Habitat Restoration annual reports on projects are made available at http://www.longislandsoundstudy.net/habitat/index.htm

Methods, Assumptions, and Suitability: The Long Island Sound Study goal is to reopen an additional 50 miles of riverine migratory corridor from 2006-2011, or 8.33 miles/year. From 1998 to 2005, the cumulative amount of miles reopened was 81 miles. In future years, additional river miles reopened beyond that baseline will be counted toward the goal.

For each project, the location (state, town), stream name, cause of degradation, project description, miles restored, targeted fish species, implementation partners, and project funding are tracked. Miles restored are calculated based on the length of stream that is reopened to fish by eliminating the obstacle.

QA/QC Procedures: Stream miles are considered reopened after fish are observed passing through the obstacle.

Data Quality Review: Each project report is reviewed by the habitat restoration coordinators, Habitat Restoration Team, and the EPA Long Island Sound Office.

Data Limitations: The stream corridor is considered reopened when anadromous fish are observed passing through the obstacle. The data do not assess the success rate of fish passage or the use of the upstream habitat.

Error Estimate: No error estimate is available for this data.

New/Improved Data Systems: The LISS is developing a new web-based data system to report and track habitat restoration data from the LISS. This will include latitude and longitude data (where possible) for each project. These data would be mapped to highlight where these projects are located in the LISS study area. This system is expected to be developed over the next several federal fiscal years.

References: Long Island Sound Study, Sound Health 2006 Environmental Indicators: www.longislandsoundstudy.net/indicators/index.htm on Habitat Protection/River Miles Restored and Coastal Habitat Restored. Stamford, CT: EPA Long Island Sound Office.

FY 2009 Performance Measure:

- **Working with partners, achieve a net increase of 100,000 acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland condition.**

Performance Database: The U.S. Fish and Wildlife Service produces information on the type and extent of the Nation's wetlands and deepwater habitats. The Emergency Wetland Resources Act of 1986 requires the Service to conduct status and trend studies of the Nation's wetlands, and report the results to Congress each decade. To date the Fish and Wildlife Service has produced four such documents. On Earth Day 2004, President Bush announced a wetlands initiative that established a federal policy beyond "no net loss" of wetlands. As part of that same Earth Day message, the President directed the Fish and Wildlife Service to accelerate the completion of the status and trends and to undertake this study at more frequent intervals. This information is used by Federal, State, and local agencies, academic institutions, U.S. Congress, and the private sector.

The status and trends report is designed to provide recent and comprehensive estimates of the abundance of wetlands in the 48 conterminous States. This status and trends report indicates whether there is an actual increase in wetland acreage or if wetlands are continuing to decrease. Up-to-date status and trends information is needed to periodically evaluate the efficacy of existing Federal programs and policies, identify national or regional wetland issues, and increase public awareness of and appreciation for wetlands.

The last status and trends report[14] provided the most recent and comprehensive estimates of the current gains and losses for different types of wetlands in the United States on public and private lands from calendar year 1998 to 2004. In calendar year 1997, there were an estimated 105.5 million acres of wetlands in the conterminous United States. In calendar year 2004 107.7 million acres of wetlands were estimated. Of this total, approximately 102.4 million acres (95 percent) are freshwater wetlands and 5.3 million acres (5 percent) are saltwater wetlands. Although the report shows that overall gains in wetland acres exceeded overall losses from 1998 through 2004 (approximately 32,000 acres/yr), this gain is primarily attributable to an increase in unvegetated freshwater ponds, some of which (such as aquaculture ponds) may not function as wetlands and others of which may have varying functional value. The Report also notes the following trends in other wetland categories: freshwater vegetated wetlands declined by 0.5%, a smaller rate of loss than in preceding years; and estuarine vegetated wetlands declined by 0.7%, an increased rate of loss from the preceding years. The Status and Trends Report does not assess the quality or condition of wetlands. EPA will continue working with FWS and other federal agencies to refine the methodology used in preparing future reports, to subdivide current wetland categories, to provide further clarity and information on the types of wetlands that are found on the landscape and to describe the functions and values they provide. In addition EPA is preparing to undertake a National wetland condition study that is scheduled for completion in 2013.

Data Source: The National Status and Trends Report is developed and published by the U.S. Fish and Wildlife Service. This is the only Federal study that provides statistically valid

[14] Dahl, T.E. 2006. Status and trends of wetlands in the conterminous United States 1998 to 2004. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 112pp.

estimates with a published standard error for all wetlands in the conterminous United States. Aerial imagery is the primary data source, and it is used with reliable collateral data such as topographic maps, coastal navigation charts, published soil surveys, published wetland maps, and State, local or regional studies. A random number of sites are also field verified. All photography is cataloged, numbered, tagged, and traced in a database management system.

For each plot, aerial imagery is interpreted and annotated in accordance with procedures published by the Fish and Wildlife Service. The results are compared with previous era imagery, and any changes recorded. The differences between the data sets are analyzed and a statistical estimate of the change is produced.

The five major kinds of wetlands are: 1) freshwater (or palustrine), 2) saltwater (or estuarine), 3) riverine, 4) lacustrine (or lakes and other deepwater habitats), and 5) marine wetlands. For analysis and reporting purposes, these types of wetlands were further divided into subcategories such as freshwater forested wetland, freshwater emergent wetland, estuarine and marine intertidal wetlands.

Methods, Assumptions and Suitability: An interagency group of statisticians developed the design for the national status and trends study published in 2000. The study was based on a scientific probability sample of the surface area of the 48 coterminous States. The area sampled was about 1.93 billion acres and the sampling did not discriminate based on land ownership. The study used a stratified, simple random sampling design. About 754,000 possible sample plots comprised the total population. Geographic information system software was used to organize the information of about 4,682 random sample plots. The plots were examined with the use of remote sensed data in combination with field work. Estimates of change in wetlands were made over a specific time period.

QA/QC Procedures: The Service has developed and implemented quality assurance measures that provide appropriate methods to take field measurements, ensure sample integrity and provide oversight of analyses, which includes reporting of procedural and statistical confidence levels. The objective was to produce comprehensive, statistically valid acreage estimate of the Nation's wetlands. Because of the sample-based approach, various quality control and quality assurance measures were built into the data collection, review, analysis, and reporting stages. This includes field verification of the plots. Six Federal agencies assist with field verification work.

Data Quality Reviews: Not Applicable

Data Limitations: Certain habitats were excluded because of the limitations of aerial imagery as the primary data source to detect wetlands. This was consistent with previous wetland status and trends studies conducted by FWS.

Error Estimate: Estimated procedural error ranged from 4 to 6 percent of the true values when all quality assurance measures have been completed. Procedural error was related to the ability to accurately recognize and classify wetlands both from multiple sources of imagery and on the ground evaluations. Types of procedural errors were missed wetlands, inclusion of upland as

wetland, misclassification of wetlands, or misinterpretation of data collection protocols. The amount of procedural error is usually a function of the quality of the data collection conventions; the number, variability, training and experience of data collection personnel; and the rigor of any quality control or quality assurance measures.

New/Improved Data or Systems: Advances in computerized cartography were used to improve data quality and geospatial integrity. Newer technology allowed the generation of existing digital plot files at any scale to overlay directly over an image base.

References:
http://wetlands.fws.gov/index.html
http://wetlands.fws.gov/bha/SandT/SandTReport.html
http://wetlands.fws.gov/Pubs_Reports/publi.htm

FY 2009 Performance Measure:

- **In partnership with the Corps of Engineers, states and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory program**

Performance Database: Since 1989, the goal of the Clean Water Act Section 404 program has been no net loss of wetlands.

Historically, the Corps has collected limited data on wetlands losses and gains in its Regulatory Analysis and Management System (RAMS) permit tracking database. The Corps has compiled national Section 404 wetland permitting data for the last 10 years reflecting acres of wetland impacts avoided (through the permit process), acres permitted for impacts, and acres mitigated. However, limitations in methods used for data collection, reporting and analysis resulted in difficulties in drawing reliable conclusions regarding the effects of the Section 404 program.

Data Source: Data included in RAMS is generally collected by private consultants hired by permit applicants or Corps Regulatory Staff. Data input is generally done by Corps staff.

Methods, Assumptions and Suitability: RAMS was designed to be an administrative aid in tracking permits, thus it lacks many of the fields necessary to adequately track important information regarding wetland losses and gains. Also, the database was modified differently for each of the 38 Corps Districts making national summaries difficult. Furthermore, the database is also proprietary making it difficult to retrofit without utilizing its original developers.

QA/QC Procedures: Historically, there has not been a high level of QA/QC with regard to data input into RAMS. Its antiquated format and numerous administrative fields discourage use. Lack of standard terms and classification also make all aspects of data entry problematic.

Data Quality Reviews: Independent evaluations published in 2001 by the National Academy of Sciences (NAS) and the General Accounting Office (GAO) provided a critical evaluation of the effectiveness of wetlands compensatory mitigation (the restoration, creation, or enhancement of wetlands to compensate for permitted wetland losses) for authorized losses of wetlands and other

waters under Section 404 of the Clean Water Act. The NAS determined that available data was insufficient to determine whether or not the Section 404 program was meeting its goal of no net loss of either wetland area or function. The NAS added that available data suggested that the program was not meeting its no net loss goal. Among its suite of recommendations, the NAS noted that wetland area and function lost and regained over time should be tracked in a national database and that the Corps should expand and improve quality assurance measures for data entry.

Data Limitations: As previously noted, RAMS currently provides the only national data on wetlands losses and gains in the Section 404 Program. Also, as previously noted, there are a number of concerns regarding the conclusions that can be drawn from these numbers. Data quality issues include:

1. Inability to separate restoration, creation, enhancement and preservation acreage from the aggregate "mitigation" acreage reported;
2. Lack of data regarding how much designated mitigation acreage was actually undertaken, and how much of that total was successful;
3. Lack of data regarding how much of the permitted impacts actually occurred; and
4. Limitations on identifying acres "avoided," because the figure is only based on the difference between original proposed impacts and impacts authorized. Often, permit applicants who are aware of the 404 program's requirements to avoid and minimize impacts to wetlands, make initial site selection and site design decisions that minimize wetland impacts prior to submitting a permit application. Such avoidance decisions benefit applicants, as their applications are more likely to be accepted and processed with minor changes. This behavioral influence that the program engenders is difficult to capture and quantify, but contributes considerable undocumented "avoided" impacts.

Error Estimate: Not applicable

New/Improved Data or Systems: The EPA and the Corps have acknowledged the need for improved 404 tracking. Between 2000-2002, the Corps developed a new national permit tracking database called ORM (Operation and maintenance business information link, Regulatory Module) to replace its existing database (RAMS). ORM1, as it was called, was deployed in most of the Corps' 38 districts by Fall 2006, but in 2004 the Corps began partnering with EPA on a set of comprehensive upgrades to ORM1 to spatially enable the data management system and improve data sharing capabilities. By July 2007, the upgraded version of ORM known as ORM2 had been deployed in 37 of the Corps' 39 districts. This should enable national reporting in 2008. Unlike ORM1, ORM2 will have expanded GIS capabilities and additional mandatory data fields for impact and mitigation data. EPA, other federal and state agencies, as well as the public will also have expanded access to data in ORM2 via a system of web-services and web-mapping tools. EPA's interface with ORM2 (tentatively named the Wetlands Information Layer (WIL)) is currently under development and will provide EPA with the ability to access and manage the data available in ORM2 to help meet business needs in the Section 404 program.

ORM2 is being designed to provide improved tracking regarding:

- Type of impacts (i.e., work type)
- Type, quantity and location of aquatic resources impacted (Using Cowardin classification system)
- Type, quantity and location of aquatic resource mitigation (Using Cowardin classification system)
- Type and quantity of mitigation by method (i.e., restoration, creation, enhancement, or preservation)
- Differentiating stream mitigation (in linear feet) from wetlands mitigation (in acres)
- Spacial tracking via GIS enhancements for both impact and mitigation sites *(planned)*
- Functional losses (debits) at the impact site and functional gains at the mitigation site (credits) if assessment tool is available and applied
- Mitigation banks via the inclusion of a comprehensive module for tracking and managing mitigation banks known as the Regional Internet-based Bank Information Tracking System (RIBITS). With EPA's assistance RIBITS has been piloted in 4 Corps districts to date.

References: Regulatory Analysis and Management System (RAMS) website: http://www.cecer.army.mil/td/tips/product/details.cfm?ID=265&TOP=1

Regional Internet-based Bank Information Tracking System (RIBITS) website: http://www.erdc.usace.army.mil/pls/erdcpub/WWW_WELCOME.NAVIGATION_PAGE?tmp_next_page=114145

National Academy of Sciences (2001). *Compensating for Wetland Losses Under the Clean Water Act.* Washington DC. Available at: http://www.epa.gov/wetlandsmitigation/

FY 2009 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples [PART performance measure]**

Performance Database: Great Lakes National Program Office (GLNPO) Great Lakes Fish Monitoring Program (GLFMP) [1](see reference #1 below). This program is broken into two separate elements, Element 1 – Open Water Trend Monitoring and Element 2 – Game Fish Fillet Monitoring. Each program collects and monitors contaminants in Great Lakes fish at alternating locations throughout the Great Lakes Basin; fish are collected at one set of sites during even years and at another set in odd years. Element 1 began with the collection of data in Lake Michigan in 1972 and the additional lakes were added in 1976. Element 2 began with the collection of data in all five of the Great Lakes in the early 1980's. In FY09, the database will contain quality reviewed field data from fish collected in 2007 and all quality reviewed analytical data for fish collected between 1972 and 2006. A new grantee was selected for this program in 2005, thus delaying the release of analytical data collected in 2004 and 2005 until 2007. Data collected in 2007 is expected to be able to be used for reporting in 2009. Data are reported on a calendar year basis and are specific to the even or odd year sampling schedule (even year sites are only compared to other even year sites etc.)

Data Source: GLNPO is the principal source of data for the Great Lakes Fish monitoring program. The Great Lakes States and Tribes assist with fish collection. Previous cooperating organizations include the U.S. Geological Survey (USGS), the U.S. Fish and Wildlife Service (USFWS), and the Food and Drug Administration (FDA).

Methods, Assumptions, and Suitability: This indicator provides concentrations of selected organic contaminants in Great Lakes open water fish. The Great Lakes Fish Monitoring Program is broken into two separate elements that monitor potential exposure to contaminant concentrations for wildlife (Element 1) and humans through consumption (Element 2). Only Element 1 is included in this indicator.

The first element, Open Lakes Trend Monitoring Program, was created to: (1) determine time trends in contaminant concentrations, (2) assess impacts of contaminants on the fishery using fish as biomonitors, and (3) assess potential risk to the wildlife that consume contaminated fish. The first element includes data from ten 600-700 mm lake trout (*Salvelinus namaycush*) whole fish composites (5 fish in each composite) from each of the lakes. Since sufficient lake trout are not found in Lake Erie, data for 400 – 500 mm walleye (*Stizostedion vitreum vitreum*) are used for that Lake.

All GLFMP data are independently reviewed for quality consideration prior to loading into the Great Lakes Environmental Database (GLENDA). Included in GLENDA are flags for each data point that can be used to evaluate the quality of the data. Each Great Lake is a unique environment with a distinct growth rate, food web, and chemical integrity. For this reason, a direct comparison of annual concentrations between basins is not appropriate. However, an average annual basin-wide percent decrease can be determined using an exponential decrease function, and the 1990 data as the baseline. The percent decrease of Element 1 can be calculated and compared to the 5% reduction target to determine if the target has been met. All years of data from all lakes are plotted on the same graph, with each year containing 5 data points. An exponential decrease is then found for the entire data set and the percent decrease is calculated from the best fit line. GLNPO rounds the calculated value to the nearest whole percentage for reporting and comparison purposes. The Lake Michigan data set represents the worst case scenario in the Great Lakes Basin for the Open Lakes Trend Monitoring Program.

QA/QC Procedures: GLNPO has an approved Quality Management System in place[2] (see reference #2 below) that conforms to the USEPA Quality Management Order and is audited every 3 years in accordance with Federal policy for Quality Management. The Quality Assurance (QA) plan that supports the analytical portion of the fish contaminant program is approved and available online[3] (see reference #3 below). The revised draft field sampling Quality Assurance Project Plan (QAPP) and draft Quality Management Plan has been submitted to the GLNPO QA Officer for review and approval. Approval of the revised sampling objectives is subject to results of a peer review conducted in fall 2007.

Data Quality Review: GLNPO's Quality Management System has been evaluated as "outstanding" in previous peer and management reviews[4] (see reference #4 below). Specific highlights relative to this indicator include: *"QA requirements are systematically planned using the DQO process. Major programs such as the Open Lakes Monitoring (Lake Guardian*

sampling activities), Open Lakes Organics Monitoring, the Biology Monitoring, the Great Lakes Fish Monitoring and the Legacy Act program were exemplary in systematic planning and documenting QA requirements." (4) GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: Great Lakes Fish Monitoring Program data are not well-suited to portray localized changes. Nevertheless, data collected at a certain site (odd year or even year sites) can be compared to data collected from the same site. In addition, only very general comparisons can be made of contaminant concentrations between lakes. A recent review of the odd year Open Lake Trend Monitoring in Lake Erie data indicate an increased variability in the data between the years of 1999 and 2003 because during those years several individual samples (fish) fell outside of the desired size range leading to a higher or lower than average mean sample size for the composite.

Error Estimate: The data quality objective of the fish contaminant program was to detect a 20% change in each measured contaminant concentration between two consecutively sampled periods at each site. Based on changing environmental conditions, the data quality objective has been tentatively revised to have an 80% probability to detect a 10% change per year, over three to four sampling periods, at the 95% confidence level. An official outside peer review of this new data quality objective and associated data is tentatively scheduled for the 4th quarter 2007. This peer review will also assist in providing a data quality objective for Element 2.

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. GLNPO has awarded a new consortium grant for these analyses that allows researchers from three different universities to specialize in their individual areas of analytical expertise and provide more timely data of a higher quality.

References:

Supporting Program Documentation: All journal publications relevant to the Great Lakes Fish Monitoring Program, final project reports, and quality documentation can be found at the GLFMP website, http://www.epa.gov/glnpo/glindicators/fish.html.

"*The Great Lakes Fish Monitoring Program - A Technical and Scientific Model For Interstate Environmental Monitoring.*" September, 1990. EPA503/4-90-004.

"Quality Management Plan for the Great Lakes National Program Office." EPA905-R-02-009. October 2002, Approved April 2003. http://www.epa.gov/glnpo/qmp/

"Great Lakes Fish Monitoring Program – Quality Assurance Project Plan for Sample Collection Activities", Great Lakes National Program Office. Available at http://www.epa.gov/glnpo/glindicators/fishtoxics/GLFMP_QAPP_082504.pdf

"GLNPO Management Systems Review of 2006." Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes basin [PART performance measure]**

Performance Database: Great Lakes National Program Office (GLNPO) integrated atmospheric deposition network [1] (see reference #1 below) (IADN) operated jointly with Environment Canada. Reporting starts with 1992 data and includes concentrations of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and organochlorine pesticides in air and precipitation; however, this Performance Measure addresses only PCBs. Monitoring results from 2007 will be reported in 2009. Data are reported on a calendar year basis the second year after collection.

Data Source: GLNPO and Environment Canada are the principal sources of the data for IADN. Data also come through in-kind support and information sharing with other Federal agencies and Canada. Only data from US stations in IADN are being used for this measure.

Methods, Assumptions, and Suitability: There are five master IADN stations, one for each lake, which are supplemented by satellite stations in other locations. The master stations are located in remote areas and are meant to represent regional background levels. Concentrations from the master stations are used for the performance measure. Concentrations from the satellite stations in Chicago and Cleveland are also sometimes used to demonstrate the importance of urban areas to atmospheric deposition to the Lakes. Air samples are collected for 24 hours using high-volume samplers containing an adsorbent. Precipitation samples are collected as 28-day composites. Laboratory analysis protocols generally call for solvent extraction of the organic sampling media with addition of surrogate recovery standards. Extracts are then concentrated followed by column chromatographic cleanup, fractionation, nitrogen blow-down to small volume (about 1 mL) and injection (typically 1 uL) into gas chromatography instruments.

All IADN data are loaded and quality controlled using the Research Database Management System (RDMQ), a Statistical Analysis System (SAS) program. RDMQ provides a unified set of quality assured data, including flags for each data point that can be used to evaluate the usability of the data. Statistical summaries of annual concentrations are generated by the program and used as input into an atmospheric loading calculation. The loadings calculation is described in detail in the Technical Summary referenced below. However, calculating loadings requires additional data and constants that introduce further error. Therefore, the averaged annual concentrations rather than the loadings are used in the performance measure. Concentrations can vary from year to year due to differences in weather (temperature, wind patterns, etc.), so comparing concentrations from one year to the next is not always appropriate. This performance measure examines the average percent decline for the **long-term trend** determined using an exponential decrease function. Each year the average percent decline is calculated after adding new data. GLNPO rounds the calculated value to the nearest whole percentage for reporting and comparison purposes. A baseline percent decrease was determined using data through 2000, and the aim is that this rate of decrease will continue.

QA/QC Procedures: GLNPO has a Quality Management System in place, which conforms to the USEPA Quality Management Order and is audited every 5 years in accordance with Federal policy for Quality Management[2] (see reference #2 below). Quality Assurance Project Plans are in place for the laboratory grantee, as well as for the network as a whole. A jointly-funded QA officer conducts laboratory and field audits, tracks QA statistics, and carries out special QA studies. Data from all contributing agencies are quality-controlled using the SAS-based system.

Data Quality Review: GLNPO's Quality Management System has been evaluated as "outstanding" in previous peer and management reviews[3] (see reference #3 below). GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards[4] (see reference #4 below). The IADN program has a joint Canadian-US quality system and binational Steering Committee that meets periodically in person or via conference calls to make decisions on network operation and data management and quality.

A regular set of laboratory and field blanks is taken and recorded for comparison to the IADN field samples. In addition, a suite of chemical surrogates and internal standards is used extensively in the analyses. There are common performance standards for PCBs, organochlorine pesticides, and PAHs. A common calibration standard for PCBs is now used. A jointly-funded QA officer conducts laboratory and field audits, tracks QA statistics, and carries out special QA studies. As previously mentioned, data from all contributing agencies are quality-controlled using a SAS-based system.

Data Limitations: The sampling design is dominated by rural sites that under-emphasize urban contributions to deposition; thus, although the data are very useful for trends information, there is less assurance of the representativeness of deposition to the whole lake. U.S. and Canadian laboratories use somewhat different sampling and analytical methods; QA studies have found that differences in resulting data are attributable mostly to the sampling differences. There are gaps in open lake water column organics data, thus limiting our ability to calculate atmospheric loadings. This gap was partially addressed through the recent implementation by GLNPO of the Great Lakes Aquatic Contaminant Surveillance (GLACS) program, which had water contaminant data collected in Lakes Michigan and Superior.

In the past, there has been a lag in the data from the Canadian sites (Burnt Island on Lake Huron and Point Petre on Lake Ontario). U.S. data is usually reported two years after it is collected (i.e., 2004 data was reported in 2006); the Canadian data may not be available on this schedule; consequently only US data is being used to report on this measure.

Error estimate: The performance measure examines the long-term trend in concentrations. Concentrations have an error of +/- 40%, usually less. Differences between laboratories have been found to be 40% or less. This is outstanding given the very low levels of these pollutants in the air and the difficulty in analysis. Improvements in quality assurance (use of a clean lab for Canadian precipitation analysis, making calibration standards consistent among agencies, etc.) are helping to further close this gap, and recent inter-comparison site data reflect this.

New/Improved Data or Systems: Joint data that has passed quality review will be available from Canada's National Atmospheric Chemistry (NAtChem) Database and Analysis System,

which includes atmospheric data from many North American networks and is linked from IADN's website at: http://www.msc.ec.gc.ca/iadn/data/form/form_e.html The IADN homepage can be found at www.msc.ec.gc.ca/iadn/ . Copies of IADN data are now held in U.S. and Canadian databases. Environment Canada management is working to reduce the data lag from the Canadian IADN stations.

References:

1. *"Great Lakes National Program Office Indicators. Air Indicators."* Available at http://www.epa.gov/glnpo/glindicators/air.html

Details of these analyses can be found in the Laboratory Protocol Manuals or the agency project plans, which can be found on the IADN resource page at http://www.epa.gov/glnpo/monitoring/air/iadn/iadn.html

Overall results of the project can be found in *"Technical Summary of Progress under the Integrated Atmospheric Deposition Program 1990-1996"* and the *"Technical Summary of Progress under the Integrated Atmospheric Deposition Network 1997-2002"*. Both (as well as the Atmospheric Loadings reports) can be found on the IADN resource page.

2. *"Quality Management Plan for the Great Lakes National Program Office."* EPA905-R-02-009. October 2002, Approved April 2003.

3. *"GLNPO Management Systems Review of 2006"*. Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

4. *"Integrated Atmospheric Deposition Network Quality Assurance Program Plan - Revision 1.1.* Environment Canada and USEPA. June 29, 2001. Unpublished - in USEPA Great Lakes National Program Office files.

FY 2009 Performance Measure:

- **Number of Beneficial Use Impairments removed within Areas of Concern. [PART performance measure]**

Performance Database: USEPA's Great Lakes National Program Office will track the cumulative total Beneficial Use Impairments (BUIs) removed within the 26 Areas of Concern (AOC) located entirely within the United States and the five AOCs that are shared by both the United States and Canada.

Data Source: Internal tracking and communications with Great Lakes States, the US Department of State and the International Joint Commission (IJC).

Methods, Assumptions, and Suitability: Restoration of U.S. or Binational Areas of Concern will ultimately be measured by the removal of all beneficial use impairments, leading to de-listing of all of the U.S. or Binational Areas of Concern by 2025. A total of 43 Great Lakes Areas of Concern have been identified: 26 located entirely within the United States; 12 located

wholly within Canada; and 5 that are shared by both countries. 301 United States or Binational Areas of Concern remain. Remedial Action Plans for each of these Areas of Concern address one or more of up to 14 beneficial use impairments associated with these areas. At the end of Fiscal Year 2006, there was a total universe of 260 beneficial use impairments reported in the United States or Binational Areas of Concern. An impaired beneficial use means a change in the chemical, physical or biological integrity of the Great Lakes system sufficient to cause any of the following:
-restrictions on fish and wildlife consumption
-tainting of fish and wildlife flavor
-degradation of fish wildlife populations
-fish tumors or other deformities
-bird or animal deformities or reproduction problems
-degradation of benthos
-restrictions on dredging activities
-eutrophication or undesirable algae
-restrictions on drinking water consumption, or taste and odor problems
-beach closings
-degradation of aesthetics
-added costs to agriculture or industry
-degradation of phytoplankton and zooplankton populations
-loss of fish and wildlife habitat

Additional information is available at: http://www.epa.gov/glnpo/aoc/index.html

The States work with the local stakeholders in the Areas of Concern to develop delisting criteria for the impaired BUIs. The BUI delisting criteria are used to assess when a BUI is restored and can be delisted. After all BUIs in an AOC are delisted, the entire Area of Concern can be delisted.

QA/QC Procedures: GLNPO has an approved Quality Management System in place (see reference #1 below) that conforms to the USEPA Quality Management Order and is audited every 5 years in accordance with Federal policy for Quality Management.

Data Quality Review: GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews (see reference #2) below. GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

Data Limitations: None known.

Error Estimate: None.

New/Improved Data or Systems: NA

References:

1. GLNPO will develop and maintain the appropriate tracking system for de-listed U.S. or binational Beneficial Use Impairments.

2. *"Quality Management Plan for the Great Lakes National Program Office."* EPA905-R-02-009. October 2002, Approved April 2003.

3. *"GLNPO Management Systems Review of 2006."* Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes [PART performance measure]**

Performance Database: Data tracking sediment remediation are compiled in two different formats. The first is a matrix that shows the annual and cumulative totals of contaminated sediment that was remediated in the Great Lakes basin in the reporting year and from 1997 for each Area of Concern or other non-Areas of Concern with sediment remediation. The second format depicts the yearly totals on a calendar year basis graphically. These databases are reported approximately one year after the completion of work, thus, results from calendar year 2008 remediation will be reported in FY 2009.

Data Source: GLNPO collects sediment remediation data from various State and Federal project managers across the Great Lakes region that conduct and coordinate contaminated sediments work. These data are obtained directly from the project manager via an information fact sheet the project manager completes for any site in the Great Lakes basin that has performed any remedial work on contaminated sediment. The project manager also indicates whether an approved Quality Assurance Project Plan (QAPP) was used in the collection of data at the site. GLNPO does not accept unsolicited data without adequate assurance that quality system documentation was in place and the reporters of the data are not likely to be biased.

Methods, Assumptions, and Suitability: The data collected to track sediment remediation in the Great Lakes show the amount of sediment remediated (dredged, capped, other) for that year, the amount of sediment remediated in prior years, and the amount of sediment remaining to be addressed for a particular site. This format is suitable for year-to-year comparisons for individual sites. GLNPO sums the volume estimates as provided by the individual project managers, but then rounds the cumulative total to the nearest one hundred thousand cubic yards for reporting purposes.

QA/QC Procedures: GLNPO relies on the individual government/agency project managers to provide information on whether an approved QAPP was in place during remediation of contaminated sediment. This information is used to decide if the data provided by the project manager are reliable for GLNPO reporting purposes. If an approved QAPP was not used, sediment data would not likely be reported by GLNPO, unless GLNPO finds that alternative information is available that provides sufficient quality documentation for the project and associated data. This approach allows GLNPO to use best professional judgment and flexibility

in reporting data from any cases where there was not a QAPP, but (a) the remedial action is noteworthy and (b) the project was conducted by recognized entities using widely accepted best practices and operating procedures.

The tracking database houses information on the calculated amount of sediment remediated at individual sites as provided by the project managers. The individual site project managers are responsible for completing the data request forms, reviewing draft figures to verify that the GLNPO project manager transferred the data correctly, and providing any updated or improved estimates. It is GLNPO's responsibility to determine if the data are usable based upon the information sheet provided by the project managers. GLNPO does not attempt to verify mass and volume estimates due to the variability in how to calculate them. GLNPO ensures that the estimates provided make sense for the site, and that all estimates are reported in the same units. GLNPO management and Sediment Team members review the data, in the graphic and matrix formats, prior to reporting. GLNPO's Sediment Team works closely with partners and has confidence in those who provide data for the summary statistics. This familiarity with partners and general knowledge of ongoing projects allows GLNPO management to detect mistakes or questionable data.

Data Quality Review: The data, in both the graphic and matrix formats, are reviewed by individual project managers, GLNPO's Sediment Team, and management prior to being released. Data quality review procedures are outlined in the QAPP referenced below. GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews. (See reference # 5 below). Specific highlights from this review relative to this indicator include: *"Across GLNPO, assessment of the quality of existing data and documentation of the quality of existing data for intended use is a standard practice. This is commendable as the Agency is still attempting to define requirements for usability existing data."* GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards.

Data Limitations: The data provided in the sediment tracking database should be used as a tool to track sediment remediation progress at sites across the Great Lakes Basin. Many of the totals for sediment remediation are estimates provided by project managers. For specific data uses, individual project managers should be contacted to provide additional information.

Error Estimate: The amount of sediment remediated or yet to be addressed should be viewed as estimated data. A specific error estimate is not available.

New/Improved Data or Systems: Existing tracking systems are anticipated to remain in place.

References:

1. Giancarlo Ross, M.B. Quality Assurance Project Plan for "Great Lakes Sediment Remediation Project Summary Support." Unpublished – in Great Lakes National Program Office files.

2. Giancarlo Ross, M.B. "*Sediment Remediation Matrix*". Unpublished - in Great Lakes National Program Office files.

3. Giancarlo Ross, M.B. *"Sediment Remediation Pie Charts"*. Unpublished - in Great Lakes National Program Office files.

4. Giancarlo Ross, M.B. "Compilation of Project Managers Informational Sheets". Unpublished - in Great Lakes National Program Office files

5. *"GLNPO Management Systems Review of 2006."* Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measure:

- **Cost per cubic yard of contaminated sediments remediated (cumulative). [PART Efficiency Measure]**

Performance Database: Data tracking sediment remediation volumes and costs are compiled for all Great Lakes Legacy Act (GLLA) projects. As all GLLA projects are managed by GLNPO, project volumes and costs are all readily available within 2-3 months of project completion. This database is updated with cost and volume numbers at the completion of each GLLA sediment clean-up project.

Data Source: GLNPO collects sediment remediation data for all the GLLA projects. At the completion of each project a hydrographic survey is conducted that provides accurate volumes for dredged/remediated sediments at all GLLA projects. This information is collected using an approved Quality Assurance Project Plan (QAPP). All GLLA projects require a QAPP prior to conducting work at the site. GLNPO does not accept data without adequate assurance that a QAPP was in place and the reporters of the data are not likely to be biased. Following the completion of a project, a final report is developed that includes information on dredged/remediated sediment volumes. Also, at the close of each project a final accounting is conducted to provide accurate final cost estimates.

Methods, Assumptions, and Suitability: This measure allows comparison of the actual cost of remediating Great Lakes contaminated sediments (pursuant to the Great Lakes Legacy Act) to a threshold cost of $200 per cubic yard. The target is achieved when the actual cost of contaminated sediment remediation (cumulative) pursuant to the Legacy Act is less than or equal to $200 per cubic yard. The program does not anticipate that actual costs per cubic yard would decrease each year, particularly since project costs are expected to increase as they become more complicated and disposal costs increase in future years.

The estimated sediment remediation cost target of $200 per cubic yard has been determined using best professional judgment. Reference points include a 2004 effort by the U.S. Great Lakes Policy Committee and a January 2007 paper on Environmental Dredging Costs analyzing 64 completed environmental dredging projects.

Targets and results will be reported on a calendar year basis. The program will use total funding as the basis of this measure, but will also track federal and non-federal dollars. Final project

costs and the quantity of cubic yards of contaminated sediments will be calculated using cumulative numbers.

Data are collected to track the amount of sediment remediated and project cost. Projects are not included in the database until they are completed; partial project information is not reported for this measure.

QA/QC Procedures: GLNPO has a QA Manager who is responsible for approval of the QAPP for all GLLA projects. A QAPP is required for each GLLA project and a draft Quality Management Plan for the GLLA is used as an overall quality management guide. Part of this site-specific QAPP includes information on the hydrographic surveys used to determine volume estimates for each project. EPA contractors oftentimes accompany the surveying crew to ensure all procedures are followed. This information is typically made available approximately 2-3 months following project completion.

Data Quality Review: The data, in both the graphic and matrix formats, are reviewed by individual project managers, GLNPO's Sediment Team, and management prior to being released. GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews (see Reference #4 below). GLNPO has implemented all recommendations from these external audits and complies with Agency Quality Standards.

Data Limitations: The data generated from this efficiency measure should be used as an indicator of the general trend in the costs of sediment remediation under the Great Lakes Legacy Act.

Error Estimate: A specific error estimate is not available.

New/Improved Data or Systems: The recent GLNPO Quality Management Review of GLNPO from July of 2006 highlighted the following improvements:

> "*Management of the Great Lakes Legacy program is exemplary. Ensuring conformance with EPA's quality requirements was evident in the creative approach to planning and overseeing quality throughout the life cycle of the project. The draft 2005 Quality Implementation and Management Plan is comprehensive. QA plans reviewed were detailed and appropriately approved. Post project meetings with EPA, state partners and local advisory councils to review project with focus on detailing lessons learned is a best practice. Data Quality Assessment to determine opportunities for improvement is a critical component of the QA Project Plan. The project officers are to be commended for the documented life cycle management for the Great Lakes Legacy Act Program.* (4)

References:

1. *Estimates of Great Lakes Sediment Remediation Needs*. U.S. Great Lakes Policy Committee. January 11, 2005. Unpublished - in USEPA GLNPO files.

2. Estes, T.J. 2007. *Environmental Dredging Project Costs--The Mystery. The Mystique, The Muddle.* Proceedings of the Fourth International Conference on Remediation of Contaminated Sediments.

3. Tuchman, M and Alexander, M. 2007. *Remediation of the Black Lagoon, Trenton, Michigan, Great Lakes Legacy Program.* Draft Report.

4. "*GLNPO Management Systems Review of 2006.*" Available at http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf.

FY 2009 Performance Measures:

- **Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.4 million pounds reduced) [PART annual output measure-Chesapeake Bay Program]**
- **Percent of goal achieved for implementation of phosphorus reduction practices (expressed as progress meeting the phosphorus reduction goal of 14.36 million pounds) [PART annual output measure-Chesapeake Bay Program]**
- **Percent of goal achieved for implementation of sediment reduction practices (expressed as progress meeting the sediment reduction goal of 1.69 million tons reduced) [PART annual output measure-Chesapeake Bay Program]**
- **Total nitrogen reduction practices implementation achieved as a result of agricultural best management practice implementation per million dollars to implement agricultural BMPs [PART annual efficiency measure]**

Performance Database: Reducing Pollution Summary (Controlling Nitrogen, Phosphorus and Sediment.) Implementation of point & nonpoint source nitrogen and phosphorus reduction practices throughout the Bay watershed, expressed as % of reduction goal achieved. The nitrogen goal is a 162.4 million pound reduction from 1986 levels to achieve an annual cap load of 175 million lbs (based on long-term average hydrology simulations). The phosphorus goal is a 14.36 million pound reduction from FY1986 levels to achieve an annual cap load of 12.8 million lbs (based on long-term average hydrology simulations). Achieving the cap loads is expected to result in achievement of the long-term restoration goals for submerged aquatic vegetation and dissolved oxygen. Point source loads are monitored or estimated based on expert evaluation of treatment processes. Nonpoint source loads are simulated based on reported implementation of best management practices (BMPs) that reduce nitrogen and phosphorus pollution. The simulation removes annual hydrological variations in order to measure the effectiveness of BMP implementation and converts the numerous BMPs, with various pollution reduction efficiencies – depending on type and location in the watershed – to a common currency of nitrogen and phosphorus reduction.

Implementation of sediment reduction practices throughout the Bay watershed, expressed as % of land-based sediment reduction goal achieved. The sediment reduction goal is a 1.69 million ton reduction from FY 1986 levels to achieve an annual cap load of 4.15 million tons (based on average hydrology simulations). Achieving this cap load is expected to result in achievement of the long-term restoration goals for submerged aquatic vegetation and dissolved oxygen. Loads are simulated based upon reported implementation of best management practices (BMPs) that reduce sediment pollution. The simulation removes annual hydrological variations in order to measure the effectiveness of BMP implementation and converts the numerous BMPs, with

various pollution reduction efficiencies – depending on type and location in the watershed – to a common currency of sediment reduction.

Agricultural BMP costs include all capital and O&M costs assumed by both landowners and government agencies. This measure focuses on agricultural BMPs because they are the most cost effective way to reduce nutrient loading in the watershed.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/186-data-2003.xls. Data have been reported for calendar years 1985, 2000, 2001, 2002, 2003, 2004, 2005, 2006 and are expected on an annual basis after 2006. Data are from Chesapeake Bay watershed portions of NY, MD, PA, VA, WV, DE, and DC.

The FY 2009 Annual Performance Report for these measures will be based on the results of the calendar year 2008 data collection. We expect to receive the preliminary results for calendar year 2008 in September 2009.

Data Source: Each jurisdiction (NY, MD, PA, VA, WV, DE, and DC) tracks and approves annual point source effluent concentrations, flows data as well as non-point source BMP data. It submits the data to the Chesapeake Bay Program Office. Contact Jeff Sweeney, jsweeney@chesapeakebay.net.

Agricultural practice costs used in the PART efficiency measure are in the guidance document "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability" (Technical Support Document) found at http://www.chesapeakebay.net/ecoanalyses.htm under "Part I: Documentation of Estimated Costs of the Tier Scenarios". The direct address is http://www.chesapeakebay.net/pubs/doc-ecoanal-PartI.pdf. Specific cost information for agricultural practices begins on electronic page 59 and a summary table of unit BMP costs is on electronic page 93.

Methods, Assumptions and Suitability: The data are of high quality. Data are consolidated by watershed boundaries at the state level and provided to the Chesapeake Bay Program Office for input into the watershed model.

What is the Watershed Model?

A lumped parameter Fortran-based model (HSPF) that mimics the effects of hydrology, nutrient inputs, and air deposition on land and outputs runoff, groundwater, nutrients and sediment to receiving waters. Ten years of simulation are used and averaged to develop the reduction effects of a given set of Best Management Practices (BMPs). Using a ten-year average of actual weather (hydrologic, temperature, wind, etc.) ensures wet, dry and average conditions for each season are included. The effectiveness of the model is dependent upon the quality of the assumptions, BMPs and landuse descriptions used. The model is calibrated extensively to real-time monitoring, outside peer review and continual updates as better information, data collection and computer processing power become available.

What are the input data?

The model takes meteorological inputs such as precipitation, temperature, evapotranspiration, wind speed, solar radiation, dewpoint, and cloud cover to drive the hydrologic simulation. The changes in nutrient outputs are primarily determined by such factors as land use acreage, BMPs, fertilizer, manure, atmospheric deposition, point sources, and septic loads.

BMPs: Watershed Model BMPs include all nutrient reduction activities tracked by the jurisdictions for which a source has been identified, cataloged and assigned an efficiency. Efficiencies are based on literature review, recommendations of the appropriate source workgroup and approved by the Nutrient Subcommittee. It is the responsibility of the jurisdictions to track and report all nutrient reduction activities within their borders and maintain documentation to support submissions.

Land use acreage is determined by combining analyses of satellite imagery and county-based databases for agricultural activities and human population. Fertilizer is determined by estimated application rates by crop and modified by the application of nutrient management BMPs. Manure applications are determined by an analysis of animal data from the census of agriculture.

Atmospheric deposition is determined by an analysis of National Atmospheric Deposition Program (NADP) deposition data and modified by scenarios of the Regional Acid Deposition Model. Point Source loads are determined from Discharge Monitoring Reports. Septic loads are estimated in a study commissioned by the Chesapeake Bay Program (CBP).

http://www.chesapeakebay.net/pubs/1127.pdf
http://www.chesapeakebay.net/pubs/114.pdf
http://www.chesapeakebay.net/pubs/112.pdf
http://www.chesapeakebay.net/pubs/777.pdf

What are the model outputs?

The watershed model puts out daily flows and nitrogen, phosphorus, and sediment loads for input to the water quality model of the Chesapeake Bay. The daily loads are averaged over a 10-year hydrologic period (1985-1994) to report an average annual load to the Bay. The effect of flow is removed from the load calculations.

What are the model assumptions?

BMPs: Model assumptions are based on three conditions: knowledge, data availability and computing power. The ability to alter what is used in the watershed model is a function of the impact the change would have on calibration. In many cases there is new information, data or methodologies that would improve the model, but changes are not possible because of the impact on the current calibration.

Changes in manure handling, feed additives, new BMPs and some assumptions could be incorporated into the model without impacting the calibration. In these cases, the changes were made.

Other input assumptions, such as multiple manure application levels, increasing the number of and redefining some land uses, defining new nutrient or sediment sources, adjusting for varying levels of management (range of implementation levels) are items scheduled for incorporation in the new model update (2008)

Input assumptions are documented in the above publications. Assumptions of the actual model code are in the HSPF documentation:
ftp://water.usgs.gov/pub/software/surface_water/hspf/doc/hspfhelp.zip

Input data are collected from states and local governments programs. Methods are described at http://www.chesapeakebay.net/data/index.htm, (refer to CBP Watershed Model Scenario Output Database, Phase 4.3). For more information contact Kate Hopkins at hopkins.kate@epa.gov or Jeff Sweeney jsweeney@chesapeakebay.net

QA/QC Procedures: State offices have documentation of the design, construction and maintenance of the databases used for the performance measures, showing they conform to existing U.S. Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) technical standards and specifications for nonpoint source data and EPA's Permit Compliance System (PCS) standards for point source data. State offices also have documentation of implemented Best Management Practices (BMPs) based on USDA NRCS standards and specification and the Chesapeake Bay Program's protocols and guidance. BMPs are traditionally used to reduce pollutant loads coming from nonpoint sources such as urban/suburban runoff, agriculture, and forestry activities.

References include: the USDA NRCS Technical Guide and Appendix H from the Chesapeake Bay Program (contact Kate Hopkins at hopkins.kate@epa.gov). Quality assurance program plans are available in each state office.

Data Quality Reviews: All data are reviewed and approved by the individual jurisdictions (NY, MD, PA, VA, WV, DE, and DC) before input to the watershed model. QA/QC is also performed on the input data to ensure basic criteria, such as not applying a BMP at a higher level than allowed. A specific level of input should yield output within a specified range of values. Output is reviewed by both the CBPO staff and the Tributary Strategy Workgroup as an additional level of QA/QC. Any values out of the expected range are analyzed and understood before approval and public release. The model itself is given a quarterly peer review by an outside independent group of experts. There have been no data deficiencies identified in external reviews.

Data Limitations: Data collected from voluntary collection programs are not included in the database, even though they may be valid and reliable. The only data submitted by state and local governments to the Chesapeake Bay Program Office are data that are required for reporting under the cost share and regulatory programs. Cost share programs include state and federal grant programs that require a recipient match. State and local governments are aware that

additional data collection efforts are being conducted by non-governmental organizations; however, they are done independently of the cost share programs and are not reported.

Error Estimate: There may be errors of omission, misclassification, incorrect georeferencing, misdocumentation or mistakes in the processing of data.

New/Improved Data or Systems: The next version of the watershed model is currently under development and will be completed in 2008. The new version (phase 5) will have increased spatial resolution and ability to model the effects of management practices. The phase 5 watershed model is a joint project with cooperating state and Federal agencies. Contact Gary Shenk at gshenk@chesapeakebay.net or see the web site at http://www.chesapeakebay.net/phase5.htm

References:

See http://www.chesapeakebay.net/data/index.htm, refer to CBP Watershed Model Scenario Output Database, Phase 4.3. Contact Kate Hopkins at hopkins.kate@epa.gov or Jeff Sweeney jsweeney@chesapeakebay.net Reducing Pollution Summary (Controlling Nitrogen, Phosphorus and Sediment) indicators are published at http://www.chesapeakebay.net/status.cfm?sid=186. The nutrient and sediment loads delivered to the Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/186-data-2003.xls. See "Chesapeake Bay Watershed Model Application and Calculation of Nutrient and Sediment Loadings, Appendix H: Tracking Best Management Practice Nutrient Reductions in the Chesapeake Bay Program, A Report of the Chesapeake Bay Program Modeling Subcommittee", USEPA Chesapeake Bay Program Office, Annapolis, MD, August 1998, available at http://www.chesapeakebay.net/pubs/777.pdf

See USDA NRCS Field Office Technical Guide available at http://www.nrcs.usda.gov/technical/efotg/. The indicator and data survey is published at http://www.chesapeakebay.net/pubs/2007reports/IndicatorSurveyReducingPollution032906.doc

See "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability" (Technical Support Document) found at http://www.chesapeakebay.net/ecoanalyses.htm under "Part I: Documentation of Estimated Costs of the Tier Scenarios". The direct address is http://www.chesapeakebay.net/pubs/doc-ecoanal-PartI.pdf. Specific cost information for agricultural practices begins on electronic page 59 and a summary table of unit BMP costs is on electronic page 93.

FY 2009 Performance Measures:

- Percent of point source nitrogen reduction goal of 49.9 million pounds achieved [PART annual outcome measure- Chesapeake Bay Program]
- Percent of point source phosphorus reduction goal of 6.16 million pounds achieved [**PART annual outcome measure-Chesapeake Bay Program]**

Performance Database: Point source nitrogen and phosphorus reductions are reported as % of goal achieved and pounds. The goal for point source nitrogen reductions is 49.9 million pound

reduction from FY 1986 levels. The goal for point source phosphorus reductions is 6.16 million pound reduction from FY 1986 levels. Point source nitrogen and phosphorus data is reported based upon monitored results from the previous calendar year.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/127-data-2002.xls. Data have been collected 1985-2006 and are expected on an annual basis after 2006.

The FY 2009 Annual Performance Report for these measures will be based on the results of the 2008 data collection. We expect to receive the preliminary results for 2008 in September 2009.

Data Source: Each jurisdiction (NY, MD, PA, VA, WV, DE, and DC) tracks and approves annual point source effluent concentrations and flow data. It submits the data to the Chesapeake Bay Program Office. Contact; Ning Zhou, zhou.ning@epa.gov.

Methods, Assumptions and Suitability: Point source loads are calculated from measured or estimated values of effluent flows and concentrations. The Chesapeake Bay Program Phase 4.3 Watershed Model is the tool used to transform calculated point source discharge loads (generally, from monitored flow and concentration data) to nutrient loads delivered to Chesapeake Bay tidal waters.

Peer-reviewed methods are employed to estimate point source discharges where measured data are not available. Refer to: "Chesapeake Bay Watershed Model Application & Calculation of Nutrient & Sediment Loadings - Appendix F: Phase IV Chesapeake Bay Watershed Model Point Source Loads" at http://www.chesapeakebay.net/pubs/114.pdf; Quality Assurance Project Plan (QAPP) "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

The following methods/assumptions pertain to discharge data:

- Monitored discharge data are generated from the EPA-approved standard sampling and analysis methods and documented in the Data Monthly Reports from facilities to jurisdictions.
- Discharge data which date to the earlier years of the record are inadequate for many regions in the Bay watershed; however, the 1986 baseline is consistent throughout the record.
- Facilities have been added to the point source database over the years, not necessarily because they physically came on-line, but because they were previously untracked. In addition, facilities have been turned inactive in the point source database over time because they went off line or combined with other facilities as new plants.
- Protocols of calculating discharges from measured or estimated flows and effluent concentrations have been adjusted throughout the data record to better reflect actual end-of-pipe loads.
- Tributary-specific pollution reduction and habitat restoration plans ("Tributary Strategies") for some jurisdictions are not final so the goals will be adjusted in the future

as jurisdictions update implementation plans that better reflect projected point source discharges.

QA/QC Procedures: Jurisdictions (NY, MD, PA, VA, WV, DE, and DC) providing point source effluent data to the Bay Program office are expected to submit documentation of their quality assurance and quality control policies, procedures, and specifications in the form of Quality Assurance Management Plans and Quality Assurance Project Plans. Jurisdictional documentation, however, is limited and it is unknown if protocols follow EPA-approved objectives as established in the "Chesapeake Bay Program Quality Assurance Guidelines and Requirements" section of the CBP Grant and Cooperative Agreement Guidance, which is relevant to projects involving the collection of environmental data.

Procedures for compiling and managing point source discharge data at the Chesapeake Bay Program office are documented in the following EPA-approved Quality Assurance Project Plan: "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

Data Quality Reviews: Point source data sets from seven jurisdictions are merged at the Chesapeake Bay Program office. Continual peer-review of the thoroughness of discharge data and methods of managing the information by the Point Source Workgroup promotes consistency and completeness among the jurisdictions of calculated end-of-pipe loads.

Data Limitations: The CBP relies on information submitted and approved by the jurisdictions (NY, MD, PA, VA, WV, DE, and DC).

Error Estimate: The CBP tries to trace significant variability in the data and limit its impact.

New/Improved Data or Systems: N/A

References:

Study/survey design procedures for point source discharges can found at:

- "Chesapeake Bay Watershed Model Application & Calculation of Nutrient & Sediment Loadings - Appendix F: Phase IV Chesapeake Bay Watershed Model Point Source Loads" at http://www.chesapeakebay.net/pubs/114.pdf
- Quality Assurance Project Plan (QAPP) "Standard Operating Procedures for Managing Point Source Data – Chesapeake Bay Program" on file for the EPA grant (contact: Quality Assurance Officer, Mary Ellen Ley, mley@chesapeakebay.net).

The Point Source Nitrogen Loads Delivered to the Bay indicator is published at http://www.chesapeakebay.net/status.cfm?sid=127.
The Point Source Phosphorus Loads Delivered to the Bay indicator is published at http://www.chesapeakebay.net/status.cfm?sid=128.
The Wastewater Pollution Controls indicator is published at http://www.chesapeakebay.net/status.cfm?sid= 226.

The indicator and data survey are published at http://www.chesapeakebay.net/pubs/2007reports/IndicatorSurveyReducingPollution032906.doc

FY 2009 Performance Measure:

- Percent of forest buffer planting goal of 10,000 miles achieved **[PART annual outcome measure-Chesapeake Bay Program]**

Performance Database: Forest buffer planting is reported as % of goal achieved. The long term goal is to plant 10,000 miles of forest buffers. The information is based on cumulative acres planted since FY 1997 provided by the states for the previous calendar year.

The Bay data files used in the indicator are located at http://www.chesapeakebay.net/pubs/statustrends/83-data-2002.xls. Data have been collected 1996-2006 and are expected on an annual basis after 2006.

The FY 2009 Annual Performance Report for these measures will be based on the results of the 2008 data collection. We expect to receive the preliminary results for 2008 in March 2009.

Data Source: Sampling design is formulated by the USDA for tracking projects and funds. Data and metadata are sent to the Forestry Work Group (state-level Departments of Forestry) by participating state coordinators and field personnel. Geographic Information System maps are produced by the UMD Center for Environmental Science. Contacts: Sally Claggett, sclaggett@fs.fed.us and Judy Okay, jokay@chesapeakebay.net

Methods, Assumptions and Suitability: Data collected for tracking linear ft, miles, and acres of forest buffers are measured directly. State data are merged to get cumulative miles. Submission criteria have been set and agreed to by State agencies. The data are summarized in a spreadsheet by geographic location with related extent of project sites. A Geographic Information System (GIS) is used to help generate the indicator data.

Data Quality Reviews: The data are collected by state field personnel and submitted to the state-level Departments of Forestry for QA/QC checks.

Data Limitations: The data are only as good as the data originally submitted by the states. This information passes through many hands before being merged into the annual cumulative miles. Human error enters into this type of record. The data are compiled and released with utmost attention to accuracy and validation of locations and extents of riparian forest buffers.

Error Estimate: none calculated.

New/Improved Data or Systems: N/A

References: The indicator is published at http://www.chesapeakebay.net/status.cfm?sid=83.

The indicator and data survey are published at http://www.chesapeakebay.net/pubs/2007reports/ForestBuffersRestoredIndicator030607.doc.

FY 2009 Performance Measures:

- **National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally (1-5 scale) [PART Long-term outcome measure tracked annually]**

- **Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.**

Performance Database: EMAP/NCA [Environmental Monitoring and Assessment Program/National Coastal Assessment] database (housed EPA/ORD/NHEERL/AED, Narragansett, RI)(Environmental Protection Agency/Office of Research and Development/National Health and Environmental Effects Research Laboratory/Gulf Ecology Division); pre-database information housed in ORD/NHEERL facility in Gulf Breeze, FL (Gulf Ecology Division) (pre-database refers to a temporary storage site for data where they are examined for QA purposes, have appropriate metadata attached and undergo initial statistical analyses); data upon QA acceptance and metadata completion are transferred to EMAP/NCA database and are web available at www.epa.gov/emap/nca. The final data are then migrated to the STORET data warehouse for integration with other water quality data with metadata documenting its quality.

Data Source: Probabilistic surveys of ecological condition completed throughout the Mid-Atlantic and Gulf of Mexico by EPA's Office of Research and Development (ORD) in 1991-1994, in southern Florida in 1995, in the Southeast in 1995-1997, in the Mid-Atlantic in 1997-1998, in each coastal state in 2000-2004 (except Alaska and Hawaii), in Alaska in 2002 and 2004, in Hawaii in 2002 and 2004, and in Puerto Rico in 2000 and 2004, and in other island territories (Guam, American Samoa and U.S. Virgin Islands) in 2004. Surveys collect condition information regarding water quality, sediment quality and biotic condition at 70-100 sites/Region (e.g., mid-Atlantic) each year of collection prior to 1999 and at 35-150 sites in each state or territory/year (site number dependent upon state) after 1999. Additional sampling by the National Estuary Program (NEP) included all individual national estuaries; the total number of sites within NEP boundaries was 30 for the two-year period 2000-2002.

These data are collected through a joint EPA-State cooperative agreement and the States follow a rigid sampling and collection protocol following intensive training by EPA personnel. Laboratory processing is completed at either a state laboratory or through a national EPA contract. Data collection follows a Quality Assurance Project Plan (QAPP) (either the National Coastal QAPP or a variant of it) and QA testing and auditing by EPA.

Methods, Assumptions and Suitability: The surveys are conducted using a probabilistic survey design which allows extrapolation of results to the target population (in this case - all estuarine resources of the specific state.) The collection design maximizes the spatial spread between sites, located by specific latitude-longitude combinations. The survey utilizes an

indexed sampling period (generally late summer) to increase the probability of encountering water quality, sediment quality and biotic condition problems, if they exist. Based on the QAPP and field collection manual, a site in a specific state is located by sampling vessel via Global Positioning System (GPS) and water quality is measured on board at multiple depths. Water samples are taken for chemistry; sediment samples are taken for chemistry, toxicity testing and benthic community assessment; and fish trawls are conducted to collect community fish data and provide selected fish (target species) for analysis of whole body and/or fillet contaminant concentrations. Samples are stored in accordance with field manual instructions and shipped to the processing laboratory. Laboratories follow QA plans and complete analyses and provide electronic information to the state or EPA. EPA and the state exchange data to ensure that each has a complete set. EPA analyzes the data to assess Regional conditions, whereas the states analyze the data to assess conditions of state-specific waters. Results of analyses on a national and Regional basis are reported as chapters in the National Coastal Condition Report (NCCR) series. The overall Regional condition index is the simple mean of the five indicators' scores used in the Coastal Condition Report (in the NCCR2 a recalculation method was provided for direct comparison of the successive reports). An improvement for one of the indicators by a full category unit over the eight year period will be necessary for the Regional estimate to meet the performance measurement goal (+0.2 over an eight year period).

Assumptions: (1) The underlying target population (estuarine resources of the United States) has been correctly identified; (2) GPS is successful; (3) QAPP and field collection manuals are followed; (4) all samples are successfully collected; (5) all analyses are completed in accordance with the QAPP; and (6) all combinations of data into indices are completed in a statistically rigorous manner.

Suitability: By design all data are suitable to be aggregated to the state and Regional level to characterize water quality, sediment quality, and biotic condition. Samples represent "reasonable", site-specific point-in-time data (not primary intention of data use) and an excellent representation of the entire resource (extrapolation to entire resource supportable). The intended use of the data is the characterization of populations and subpopulations of estuarine resources through time. The data meet this expectation and the sampling, response, analysis and reporting designs have been peer reviewed successfully multiple times. The data are suitable for individual calendar year characterization of condition, comparison of condition across years, and assessment of long-term trends once sufficient data are collected (7-10 years). Data are suitable for use in National Coastal Condition calculations for the United States and its Regions to provide performance measurement information. The first long-term trends analysis will appear in the next NCCR (NCCRIII) representing trends between1990-2002.

QA/QC Procedures: The sampling collection and analysis of samples are controlled by a Quality Assurance Project Plan (QAPP) [EPA 2001] and the National Coastal Assessment Information Management Plan (IMP)[EPA 2001]. These plans are followed by all twenty-three coastal states and 5 island territories. Adherence to the plans are determined by field training (conducted by EPA ORD), field audits (conducted by EPA/ORD), round robin testing of chemistry laboratories (conducted by EPA/ORD), overall systems audits of state programs and national laboratory practices (conducted by EPA), sample splits (sent to reference laboratories), blind samples (using reference materials) and overall information systems audits (conducted by

EPA/ORD). Batch sample processing for laboratory analyses requires the inclusion of QA samples in each batch. All states are subject to audits at least once every two years. All participants received training in year 2000 and retraining sessions are scheduled every two years.

Data Quality Reviews: Data quality reviews have been completed in-house by EPA ORD at the Regional and national level in 2000-2003 (National Coastal Assessment 2000-2003) and by the Office of Environmental Information (OEI) in 2003 (assessment completed in June, 2003 and written report not yet available; oral debriefing revealed no deficiencies). No deficiencies were found in the program. A national laboratory used in the program (University of Connecticut) for nutrient chemistry, sediment chemistry and fish tissue chemistry is being evaluated by the Inspector General's Office for potential falsification of laboratory results in connection with other programs not related to NCA. The NCA has conducted its own audit assessment and only one incorrect use of a chemical digestion method for inorganic chemistry samples (metals) was found. This error was corrected and all samples "digested" incorrectly were reanalyzed at no cost.

Data Limitations: Data limitations are few. Because the data are collected in a manner to permit calculation of uncertainty and designed to meet a specific Data Quality Objective (DQO) (<10% error in spatial calculation for each annual state estimate), the results at the Regional level (appropriate for this performance measure) are within about 2- 4% of true values dependent upon the specific sample type. Other limitations as follows: (a) Even though methodology errors are minimized by audits, in the first year of the NCA program (2000) some errors occurred resulting in loss of some data. These problems were corrected in 2001 and no problems have been observed since. (b) In some instances, (<5%) of sample results, QA investigation found irregularities regarding the precision of measurement (e.g., mortality toxicity testing of controls exceeded detection limit, etc.). In these cases, the data were "flagged" so that users are aware of the potential limitations. (c) Because of the sampling/ analysis design, the loss of data at a small scale (~ 10%) does not result in a significant increase in uncertainty in the estimate of condition. Wholesale data losses of multiple indicators throughout the U.S. coastal states and territories would be necessary to invalidate the performance measure. (d) The only major source of external variability is year-to-year climatic variation (drought vs. wet, major climatic event, etc.) and the only source of internal variation is modification of reporting indicators (e.g., new indices, not a change in data collected and analyzed). This internal reporting modification requires a re-analysis of earlier information to permit direct comparison. (e) There is generally a 2-3 year lag from the time of collection until reporting. Sample analysis generally takes one year and data analysis another. Add another year for report production and peer review. (f) Data collections are completed annually; The EPA/ORD data collection collaboration will continue through 2004. Beginning in 2005, ORD began assisting OW, as requested, with expert advice, but discontinued its financial support of the program.

Error Estimate: The estimate of condition (upon which the performance measure is determined) has an annual uncertainty rate of about 2-3% for national condition, about 5-7% for individual Regional indicators (composite of all five states data into a Regional estimate), and about 9-10% for individual state indicators. These condition estimates are determined from the survey data using cumulative distribution functions and the uncertainty estimates are calculated using the Horvitz-Thompson estimator.

New/Improved Data or Systems:

(1) Changes have occurred in the data underlying the performance measure based on scientific review and development. A change in some reporting indicators has occurred in order to more accurately represent the intended ecological process or function. For example, a new eutrophication index was determined for the 2000 data. In order to compare this new index to the 1991-1994 data, the earlier data results must be recomputed using the new technique. This recalculation is possible because the underlying data collection procedures have not changed.

(2) New national contract laboratories have been added every year based on competition. QA requirements are met by the new facilities and rigorous testing at these facilities is completed before sample analysis is initiated. QA adherence and cross-laboratory sample analysis has minimized data variability resulting from new laboratories entering the program.

(3) The only reason for the discontinuation of the National performance goal would be the elimination of the surveys after 2004 or any other year thereafter.

In order to continue to utilize the 2001 National Coastal Condition report as the baseline for this performance measure, the original scores reported in 2001 have been re-calculated in the 2004 report using the index modifications described above (#1). These "new" results for the baseline (re-calculated scores) are reported in Appendix C of the 2005 report.

References:

1. Environmental Monitoring and Assessment Database (1990-1998) and National Coastal Assessment Database (2000- 2004) websites: www.epa.gov/emap and www.epa.gov/emap/nca (NCA data for 2000 is only data available at present)
2. National Coastal Assessment. 2000-2003. Various internal memoranda regarding results of QA audits. (Available through John Macauley, National QA Coordinator NCA, USEPA, ORD/NHEERL/GED, 1 Sabine Island, Gulf Breeze, FL 32561)
3. National Coastal Assessment. 2001. Quality Assurance Project Plan. EPA/620/R-01/002.(Available through John Macauley above)
4. National Coastal Assessment. 2001. Information Management Plan. EPA/620/R-01/003 (Available through Stephen Hale, NCA IM Coordinator, ORD/NHEERL/AED, 27 Tarzwell Drive, Narragansett, RI)
5. U.S. Environmental Protection Agency. 2001. National Coastal Condition Report. EPA-620/R- 01/005.
6. U.S. Environmental Protection Agency. 2004. National Coastal Condition Report II. In review Assigned Report Number EPA-620/R-03/002.

FY 2009 Performance Measure:

- **Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas**

Performance Database: EPA's "Surf Your Watershed" and EPA's WATERS Expert Query Tool

Data Source: Data regarding impaired segments are from EPA's "Surf Your Watershed" and EPA's WATERS Expert Query Tool updated every two years when states submit their 303(d) reports on the status of impaired water segments as required in the Clean Water Act (CWA) 305(b) report. Another source of data is the EPA-approved Decision Documents, the Quality Assurance Project Plan (QAPP) for state 303(d) data.

Methods, Assumptions and Suitability: To begin, the Decision Documents for each Gulf State are acquired. The water bodies listed as impaired for Florida, Alabama, and Mississippi are compared to "Surf Your Watershed" and then to the WATERS Expert Query Tool. Louisiana and Texas have a different form for their Decision Documents, which include only delisted water bodies. For these two states only "Surf Your Watershed" and WATERS Expert Query Tool are used. All the data are cross referenced for discrepancies. Then, tables are created for each watershed in the Gulf of Mexico Program's Priority Watershed Inventory. In all, 67 tables are created. These tables include a segment identification number for viewing the water segment on a map, a link to the URL for "Surf Your Watershed", name of the state basin the segment is located, the watershed the segment is located, the name of the waterbody, the number and type of impairment for that segment, and the year the impairment is listed. Delisting information is also listed in the tables for segments that have that information. The information available for delisting includes the segment identification number, the waterbody name, what impairment was delisted, the basis for the delisting, and a link to the total maximum daily load (TMDL) document if it exists. Segments that are shared among two or more watersheds are highlighted for easier recognition when counting the number of segments duplicated among watersheds.

Shapefiles are acquired from the states that contain the 303(d) (e.g., impaired) segments for that state. The segments listed in the state shapefile, however, do not always match EPA's ("Surf Your Watershed", WATERS Expert Query Tool, and Decision Documents). Therefore, it is sometimes necessary to contact the state for additional shapefiles that contain missing segments. The data are grouped by watershed with a name to represent the area in the shapefile (ex. 2002_03170009_303d_line). New fields are added to the shapefile such as segment identification number (matches the number from the tables), TMDL status ("Impaired Water Segment," "TMDL Completed," "Restored"), number of impairments for that segment, list of impairments for that segment, and the waterbody name for that segment. Maps are then generated to show the number of impairments in each watershed. "Impaired Water Segments" are visible with a red cross hatch, "TMDL Completed" has a yellow cross hatch, and a "Restored" appears with a blue cross hatch. Each segment is labeled with the identification number found in the shapefile and the table. All maps include the Hydrologic Unit Code (HUC) number and the HUC name, legend, scale bar, inset map, GMPO logo, disclaimer for the state if one was provided, and the date the map was created. In all, 67 maps are created.

QA/QC Procedures: There are three EPA data sources: "Surf Your Watershed," "WATERS," and Decision Documents. Each data source is cross referenced with the other two sources to

ensure there are no discrepancies in the listed impaired segments. The EPA data sources are from EPA- reviewed state documents.

Data Quality Reviews: There are no outside reviews of the 67 tables and maps generated in a report. However, GMPO is awaiting final approval of new web pages that will display them. This new site will be a subset of "Surf Your Watershed" and will be labeled as "Surf Your Gulf Watershed". "Surf Your Gulf Watershed" will detail the impaired segments for the 13 priority areas.

Data Limitations: Data are updated every two years on "Surf Your Watershed" and in WATERS Expert Query Tool due to the fact that states submit a 303(d) report every two years on the status of the impaired segments in each state as required in Clean Water Act (CWA) 305(b) report.

Error Estimate: None identified.

References:
EPA's "Surf Your Watershed" http://cfpub.epa.gov/surf/locate/map2.cfm

EPA's WATERS (Watershed Assessment Tracking and Environmental Results) Expert Query Tool http://www.epa.gov/waters/tmdl/expert_query.html

FY 2009 Performance Measure:

- **Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.**

Performance Database: Coastal Emergent wetlands border the Gulf of Mexico and include tidal saltwater and freshwater marshes and mangroves. Encompassing over two million hectares (five million acres or more than half of the national total), the Gulf of Mexico coastal wetlands serve as essential habitat for a diverse range of species.

Total wetland loss (coastal and inland) for the five Gulf States from 1780 until 1980 was estimated to be 40 million square kilometers, approximately 50%. Between 1985 and 1995 the southeastern U.S. lost the greatest area of wetland (51% of the national total).
Coastal emergent wetland loss for Louisiana represents 67% of the nation's total loss (177,625 hectares or 438,911 acres) from 1978 to 1990.

The Gulf of Mexico Program achieves its acreage goal each year by cooperative funding of projects that result in the enhancement, protection or restoration of coastal habitat. This coastal habitat includes marshes, wetlands, tidal flats, oyster beds, seagrasses, mangroves, dunes and maritime forest ridge areas.

Data Source: The amount of acreage restored, protected and enhanced by the Gulf of Mexico Program is derived from the individual project's Statement of Work contained within the project proposal. This acreage is then verified by the EPA Project Officer and by the project's Program

Manager through site visits during the life of the project, quarterly reports submitted to the Gulf of Mexico Program Office (GMPO), aerial photography, ground-truthing, and digital topographic. Data verification occurs at the end of the project too.

Methods, Assumptions and Suitability: The Gulf of Mexico Program achieves this goal successfully each year by cooperatively funding restoration projects with our multiple federal and state program partners. Our partners additionally follow required QA/QC procedures on their projects and routinely conduct site visits to provide verification of the acreage restored. These partners and our process to restore, protect and enhance Gulf coastal habitat include:

1. Gulf of Mexico Program Office State Proposal Solicitation through Requests for Proposals (RFPs)
2. GMP Partnership Challenge Grant Programs
   A) National Fish and Wildlife Foundation (NFWF) Cooperative Agreement
   5- STAR Habitat Restoration Challenge Grants
   Shell Marine Habitat Restoration Grants
   B) NOAA Community Restoration Grant Program Supports Gulf Ecological Management Sites (GEMS)

http://www.epa.gov/gmpo/habitat/hablinks.html

QA/QC Procedures: The projects that are funded are required to provide a QA/QC plan if the restoration project involves monitoring. In those cases, EPA has documented Assistance Agreements with QA/QC approved plans. Both NOAA and the National Fish and Wildlife Foundation require QA/QC plans if the projects involve scientific monitoring. Additionally, the EPA Project Manager is required to conduct site visits, during the duration of the project to verify actual acreage restored, protected and/or enhanced. QA/QC includes but is not limited to, aerial photography, groundtruthing, transect growth monitoring and routine site visits of all funded projects.

Data Quality Reviews: Award Process for supporting habitat at restoration projects through partnership cooperative agreements.

1. Gulf of Mexico Program Office Competitive RFPs
2. GMP Partnership Challenge Grant Program Grants

   A) National Fish and Wildlife Foundation (NFWF)

   5-STAR Projects - Habitat office staff and team members review proposals, rank and recommend projects for funding. This review includes identification of any duplicative proposals already submitted for funding through other grant programs supported by GMPO, as well as opportunities to broker with other habitat grant funding programs, i.e. through Coastal America and the Corporate Wetlands Restoration Partnership Grant Program (CWRP)

   Shell Marine Habitat Restoration Grants - Habitat team reviews and ranks proposals.

   B) NOAA Community Restoration Grant Program

   Supports Gulf Ecological Management Sites (GEMS). The Gulf of Mexico Foundation, NOAA and the Gulf of Mexico Program established a Steering

Committee to review and select the NOAA CRP projects for funding. The steering committee consists of EPA, all GEMS State Managers, NOAA, and USFWS staff. As with our partnership with the National Fish and Wildlife Foundation, the review is to ensure there is no duplication of funding and to seek opportunities for brokering with other restoration grant programs.

Review of the restoration data occurs in the field and through field analysis by the project manager as the project progresses. This review is accomplished through measures such as aerial photography, groundtruthing, transect growth monitoring and routine site visits of all funded projects. Data are verified by EPA and our Program Partners through site visits and quarterly reports.

Data Limitations: Limitations of use for the data are carefully detailed by the data provider and project manager for each project that yields acreage. Images and topographic data have routinely been used for restoration projects and few to no limitations are expected from these datasets beyond that of image resolution.

Error Estimate: The acreage is documented by the project managers for each project in required EPA Quarterly Reports. Data are subject to a second verification following the completion of the project.

References:

Status and Trends of the Nation's Biological Resources, Volume 1. U.S. Department of the Interior, U.S. Geological Survey, National Wetlands Research Center, 1998

Conservation Challenge; FL,AL,MS,LA,TX Coastal Regions, National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, Gulf of Mexico Program MX 984769 Project Period: 8/06/1999- 12/31 0/2007. Website: http://www.nfwf.org

The Gulf Community Restoration Partnership Program (GCRP). This program provides acreage through the combined efforts of the NOAA Community-Based Restoration Program and the Gulf of Mexico Program's Gulf Ecological Management Sites (GEMS) program and the Gulf States natural resource agencies and the Gulf of Mexico Foundation. Website: http://www.gulfmex.org/restoration.htm

SIR 2006-5287: Seagrass Status and Trends in the Northern Gulf of Mexico: 1940-2002 http://pubs.usgs.gov/sir/2006/5287/

FY 2009 Performance Measures:

- **Achieve no net loss of stony coral cover in the Florida Keys National Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida working with all stakeholders (federal, state, regional, and local)**
- **Maintain the overall health and functionality of seagrass beds in the FKNMS as measured by the long-term seagrass monitoring project that addresses composition and nutrient availability**

- **Maintain the overall water quality of the near shore and coastal waters of the FKNMS**

Performance Database: As required by the Florida Keys National Marine Sanctuary and Protection Act of 1990, EPA and its partners developed a comprehensive long-term status and trends monitoring program as a critical component of the Water Quality Protection Program for the FKNMS. The comprehensive monitoring program was initiated in 1995 and includes water quality, coral reef and seagrass components. Annual results are reported each year on a fiscal-year basis. Historically, EPA has provided the majority of funding for the three monitoring projects, but other agencies (e.g., NOAA, U.S. Army Corps of Engineers (USACOE), and state/local government agencies) also provide significant funding.

Data Source: The Water Quality and Seagrass Monitoring Projects are conducted by Florida International University's Southeast Environmental Research Center (SERC) and the Coral Reef Evaluation and Monitoring Project is conducted by the Florida Fish and Wildlife Research Institute. EPA provides funding via cooperative agreements and the other government agencies provide funds via federal assistance agreements or contracts. Monitoring data are collected each year on an annual or quarterly basis depending on the project. Results of each monitoring project are reported in annual reports. The data for each monitoring project is collected and archived by staff of the Florida Fish and Wildlife Research Institute under a cooperative agreement with the EPA. In addition, the principal investigators for each monitoring project have developed Web sites where anyone can go and review the data.

Methods, Assumptions and Suitability: The comprehensive monitoring program for the FKNMS was developed by a large group of technically competent and knowledgeable scientists familiar with the aquatic environment of the Florida Keys and the coral reef ecosystem. For each monitoring project, EPA worked closely with recognized experts to develop a detailed scope of work including sampling locations and frequency, parameters, field and analytical methods, quality assurance/quality control, data management, and reporting. The monitoring program was designed to provide representative coverage of the entire 2,900 square nautical miles of the Sanctuary. In general, monitoring sites were located throughout the FKNMS on a stratified-random basis and were determined to be compatible with EPA's Environmental Monitoring and Assessment Program protocol (http://www.epa.gov/region4/sesd/reports/epa904r01002.html). The overall monitoring program was designed to address the primary objective of the comprehensive long-term monitoring program for the FKNMS - to provide data needed to make unbiased, statistically rigorous statements about the "status of and trends in" selected water quality conditions and biological communities in the Sanctuary. For the monitoring program, the null hypothesis is that there is no change over time. The field data are tested against the null hypothesis that no change has occurred. All three monitoring projects (water quality, coral reef and seagrass) have demonstrated the ability to detect change over time and are suitable for determining the health of the coral reef ecosystem of the FKNMS.

QA/QC Procedures: The principal investigators for each monitoring project developed and submitted to EPA a Quality Assurance Project Plan (QAPP) to ensure that the data generated are accurate and representative of actual conditions and the degree of certainty of the data can be established. The QAPPs were developed in accordance with EPA guidance documents and the

principal investigators consulted with the Regional QA/QC Officer and the Project Officer for the monitoring projects. It was required that the QAPP be approved by EPA before any work could begin on a monitoring project.

Data Quality Review: Through the QAPP, the principal investigators explicitly commit to incorporating procedures that will reduce random and systematic errors. In addition, the principal investigators document quality assurance procedures and evaluate the quality of the data being generated by the monitoring projects. Further, the Technical Advisory Committee (TAC) of the Florida Keys National Marine Sanctuary reviews and assesses the monitoring projects and the data they produce on a regular and continuing basis.

Data Limitations: There are no known limitations of the data set.

Error Estimate: Coral Reef Evaluation and Monitoring Project – a power analysis was done at the beginning of the project to determine the limit of detectable change for the point count method used to determine the percent stony coral cover within the FKNMS. The estimate of actual performance is accurate to 2.4%.

Water Quality Monitoring Project – the project collects data from 154 sites within the FKNMS on a quarterly basis. Therefore, error estimates for the 2005 baseline values are mostly due to the large spatial variability and seasonal temporal variability. Because water quality data are not normally distributed, the project uses the median as the measure of central tendency. For chlorophyll a, the interquartile range (IQR) is 0.29 and the median absolute deviation (MAD) is 0.12. The light attenuation k_d IQR is 0.12 and the MAD is 0.05. Dissolved inorganic nitrogen has an IQR of 0.50 and a MAD of 0.26. For total phosphorus, the IQR is 0.90 and the MAD is 0.04.

Seagrass Monitoring Project – benthic plant community structure is measured using the rapid visual assessment technique known as the Braun-Blanquet method. This method is very quick, yet it is robust and highly repeatable, thereby minimizing among-observer differences. The Braun-Blanquet method has proven to be precise enough to detect subtle interannual variations yet robust enough to survive changes in personnel. A summary metric or species composition indicator (CSI) that assesses the relative importance of slow-growing plants to community composition is being computed for the 30 permanent seagrass monitoring sites. During the first 10 years of monitoring, this CSI index had an average of 0.48 $\pm$ 0.04 ($\pm$ one standard error of the mean). The significance of changes in the SCI will be assessed using these distribution parameters. Elemental content (carbon, nitrogen, and phosphorus) of seagrass leaves is determined by cleaning the leaves of all epiphytes, drying the leaves at low temperature, and grinding to a fine powder. Elemental content is then measured using established methods and calculating on a dry weight basis. Analyses are run in duplicate using independent NIST-traceable for each determination. If the duplicate analyses differ by more than 10%, additional samples are run. A summary elemental content indicator metric or elemental indicator (EI), which is the mean absolute deviation of the N:P ratio of seagrass tissue from 30:1 is computed for the 30 permanent monitoring sites. In 2006, the mean EI was 8.28 + 1.47 ($\pm$ one standard error of the mean). The significance of changes in the EI will be assessed using these distribution parameters.

New/Improved Performance Data or Systems: The database management system for the Water Quality Protection Program of the FKNMS is geographic information based (GIS) and used to record the biological, physical, and chemical results from the comprehensive monitoring projects. The data from the three monitoring projects are collected and archived by the database managers at the Florida Fish and Wildlife Research Institute. The data archives component encompasses both raw and synthesized data. The data integration component incorporates the synthesized data, both tabular and geospatial. These data are integrated into a GIS to facilitate further analysis by scientists and managers. The results data contained within the database integration system are documented with project level metadata as well as attribute or parameter level metadata. Tools are being further developed to allow users to query data by location, date and parameters collected. The overall goal of the database management system is to provide a data integration system that takes into account the varying levels of data produced by the various monitoring projects and the needs of both managers and researchers.

References:
http://serc.fiu.edu/wqmnetwork/
www.serc.fiu.edu/wqmnetwork
www.fiu.edu/~seagrass
http://ocean.floridamarine.org/fknms_wqpp
http://research.myfwc.com/features/category_sub.asp?id=2360

FY 2009 Performance Measure:

- **Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 parts per billion total phosphorus criterion throughout the Everglades Protection Area marsh**

Performance Database: As required by the Clean Water Act and Florida's Everglades Forever Act, the oligotrophic Everglades marsh within the Everglades Protection Area must meet the newly adopted 10 parts per billion numeric criterion for total phosphorus. EPA approved the criterion and its application methodology in 2005. A monitoring program to determine whether the criterion is in fact being met throughout the Everglades marsh is necessary to determine whether the water body can be expected to meet its designated use, whether phosphorus concentrations are stable or are increasing, whether the concentrations in impacted areas are improving, and whether watershed phosphorus control efforts costing in excess of $1 billion are effective.

Data Source: Water quality is monitored throughout the Everglades marsh at dozens of long-term monitoring stations. These stations are sampled cooperatively in a joint effort by Florida Department of Environmental Protection, South Florida Water Management District, Everglades National Park, and Loxahatchee National Wildlife Refuge. Some of these stations were monitored previously by the United States Geological Survey beginning as long ago as 1953. Results of monitoring are reported in annual reports. The data are collected and are available to the public through a web site. Stormwater Treatment Area (STA) effluent phosphorus monitoring is in place as required by Florida and NPDES permits.

Methods, Assumptions and Suitability: The monitoring program was developed by scientists, with decades of experience regarding Everglades water quality and ecology, from the Florida Department of Environmental Protection, South Florida Water Management District, Everglades National Park, Loxahatchee National Wildlife Refuge and the EPA. The marsh monitoring program is designed to provide representative coverage of the entire 2,000 square mile freshwater Everglades. The monitoring program is capable of detecting temporal trends in phosphorus condition throughout the Everglades. The null hypothesis is that there is no change over time.

QA/QC Procedures: Field samples are collected by standard sampling protocol and analytical results are from accredited laboratories using standard methods. In addition, a series of ongoing laboratory round-robin exercises are overseen by the Florida Department of Environmental Protection. Field and lab protocol are also periodically reassessed by a Technical Oversight Committee that includes five Florida and federal agencies. Quality Assurance Project Plans are in place.

Data Quality Review: Water is sampled in the field by Department of Interior or South Florida Water Management District technical personnel using established Standard Operating Procedures. Data are subject to ongoing quality review by the interagency Technical Oversight Committee on a regular and continuing basis.

Data Limitations: There are no known limitations of the data set.

Error Estimate: Annual average total phosphorus concentrations are accurate to within 0.1 part per billion.

New/Improved Performance Data or Systems: Interagency dialogue and oversight provide ongoing reassessments that evaluate data credibility and completeness.

References:
http://www.epa.gov/waterscience/criteria/nutrient/ecoregions/
http://www.sfwmd.gov/org/ema/toc/index.html
http://www.sfwmd.gov/org/ema/toc/archives_docs.html
http://www.dep.state.fl.us/labs/assessment/index.htm
http://www.dep.state.fl.us/labs/everglades/roundrobin.htm
http://wwwalker.net/#Selected%20Publications

FY 2009 Performance Measure:

- **Percent of the population in each of the U.S. Pacific Island Territories served by community drinking water systems will receive drinking water that meets all applicable health-based drinking water standards throughout the year** (2005 Baseline: 95 percent of the population in American Samoa, 10 percent in CNMI (Commonwealth of the Northern Mariana Islands), and 80 percent of Guam served by

community water systems received drinking water that meets all applicable health-based drinking water standards throughout the year.)

Performance Database: SDWIS (Safe Drinking Water Information System) is the database used to track this performance measure throughout the United States. However, of the three U.S. territories in the Pacific, only American Samoa has put data into this database on a reliable basis. (For example, Guam has not entered data in this database in years. We are working with CNMI and Guam in 2007 to enter data into SDWIS on a reliable basis.) In the interim, in Guam and CNMI we are working to get the data directly from the public water systems.

Data Source: Health-based violations are either reported by the territories (currently American Samoa only) or obtained through direct communication with public water systems (currently Guam and CNMI). Percentage of population served by community drinking water systems receiving 24-hour water is obtained through direct communication with territory (CNMI only). Population data are obtained from U.S. Census data.

Methods, Assumptions and Suitability: Our method is to calculate the performance measure as the percentage of people in the territories served by public water systems who are receiving 24-hour water that meets all health-based drinking water standards (i.e., no health-based violations). We can provide an aggregate value for the three Pacific territories using a weighted average based upon their populations. Our first main assumption is that a public water system must provide 24-hour water on a regular basis before it can provide drinking water that meets all health-based drinking water standards. This is an assumption that generally does not need to be made in the rest of the United States; and in the Pacific territories is an issue mainly in the CNMI. For example, the island of Saipan in the Northern Mariana Islands (population 70,000) is the only municipality of its size in the U.S. without 24-hour water (most of its residents get water only one or two hours per day; all but the poorest residents rely on bottled water or rain water as the source of their drinking water). This method is suitable for the Pacific islands because the situation is unique to the Pacific Island territories, and is one of the underlying reasons for the need to track access to safe drinking water. Our second main assumption is that health-based violations reported by the territories are correct. Our third main assumption is that US Census data are correct.

QA/QC Procedures: American Samoa follows QA/QC procedures in the data it submits to EPA for entry into the SDWIS database. There is no other Quality Management Plan or Quality Assurance Project Plan currently associated with this indicator.

Data Quality Reviews: Although the territories are responsible for reviewing and assuring quality of health-based violation reporting, EPA has had to communicate directly with public water systems in Guam and CNMI to get the data (and continues to do so as part of ongoing enforcement and compliance efforts). EPA is also in direct communication with the territories to obtain percentage of population receiving 24-hour water. The US Census is responsible for reviewing and assuring population data quality. There is no other peer review or external data quality review.

Data Limitations: Potential data limitations include: (a) inconsistencies in reporting health-based violations among territories; and (b) inaccuracies due to imprecise measurement of percentage of population served by public water systems that receives 24-hour water.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: Regarding SDWIS data, EPA will be working with the territories of Guam and CNMI in 2007 to provide more complete data to assess performance. Regarding percentage of population receiving 24-hour water, EPA will be working closely with the CNMI public water system and the CNMI Water Task Force (in the Office of the Governor) to both more accurately assess percentage of population receiving 24-hour water, and to provide 24-hour water to a greater percentage of the population.

References: N/A.

FY 2009 Performance Measure:

- **Percent of time sewage treatment plants in the U.S. Pacific Island Territories will comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS)** (2005 Baseline: the sewage treatment plants in the Pacific Island Territories complied 59 percent of the time with BOD and TSS permit limits.)

Performance Database: ICIS (Integrated Compliance Information System) is used to track this performance measure.

Data Source: DMRs (Discharge Monitoring Reports) provided to EPA on a quarterly basis by the Pacific Island wastewater utilities are the data source.

Methods, Assumptions and Suitability: Permit conditions require each of the wastewater utilities to use EPA approved sampling methods. DMRs are self-reported by the Pacific island utilities to EPA on a quarterly basis for major facilities (greater than 1 million gallons per day of discharge). The main assumption is that the self-reported data are accurate.

QA/QC Procedures: Each of the Pacific island utility labs has and follows QA/QC procedures for this data.

Data Quality Reviews: EPA reviews the DMR reports to make sure they are thoroughly filled out. There are occasional EPA field audits of the utility labs.

Data Limitations: Potential data limitations include: (a) inconsistencies among personnel in performing sampling and analysis; and (b) incomplete data due to lack of sampling or lack of lab equipment.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: EPA maintains communication with each of the utilities to improve sampling and analysis of BOD and TSS, and to improve reporting of DMRs.

References: N/A

FY 2009 Performance Measure:

- **Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming.** (2005 Baseline: beaches were open and safe 64 percent of the 365-day beach season in American Samoa, 97 percent in CNMI and 76 percent in Guam.)

Performance Database: PRAWN ((Program tracking for Advisories, Water quality and Nutrients) is used to track this performance measure.

Data Source: Reports provided to EPA on a quarterly basis by the Pacific Island environmental agencies (Guam EPA, American Samoa EPA, CNMI DEQ) are the data source.

Methods, Assumptions and Suitability: The Pacific Island environmental agencies use EPA-approved methods to take bacteriological samples at beaches and analyze them in their labs. They put together reports that include beach sampling data and number of days beaches were closed or had advisories posted based on bacteriological concerns. The Pacific Island environmental agencies submit these reports to EPA on a quarterly basis. EPA inputs data from the report into the PRAWN database. The main assumption is that the Pacific Island environmental agencies are following the EPA-approved methods for sampling and analysis. The secondary assumption is that EPA's contractor is correctly entering data from the reports.

QA/QC Procedures: Each of the Pacific Island environmental agencies has EPA-certified laboratories. Part of the certification process is establishing and adhering to QA/QC procedures.

Data Quality Reviews: EPA recertifies the labs on a periodic basis. Data quality from all lab procedures is reviewed.

Data Limitations: Potential data limitations include: (a) reporting inconsistencies within the database among jurisdictions which report on a quarterly basis (as the Pacific territories do) and on an annual basis.

Error Estimate: A quantitative estimate of error in the database is not possible.

New/Improved Data or Systems: EPA maintains communication with the Pacific territorial environmental agencies on changes in format which make it easier to enter data into the PRAWN database.

References: N/A.

FY 2009 Performance Measure:

- **Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed.**

Performance Database: The database used to track habitat restoration in the Lower Columbia River watershed is titled "Regional Restoration Project Inventory". The database includes at a minimum the following data fields: Project title, lead organization, project partners, latitude/longitude, and acreage. Results are updated annually on a fiscal year basis.

Data Source: Habitat restoration data are reviewed through direct communication with multiple agencies and partners conducting habitat restoration projects in the Lower Columbia River watershed, and the database is cross-referenced with other state, regional, and federal funding sources and project tracking databases. Due to the numerous partners involved in each project, and their involvement in the maintenance of the database, the confidence in the data accuracy and reliability is high.

Methods, Assumptions and Suitability: Habitat restoration data in the Lower Columbia River watershed is collected and tracked via direct and ongoing communication with the network of agencies and organizations conducting habitat restoration in the watershed. The main assumption for this method is that all agencies and organizations conducting habitat restoration in the watershed are included in the database review. The acreage indicator chosen is suitable for progress towards our goal because the restoration projects included in the database protect, enhance, and restore both wetland and upland habitat.

QA/QC Procedures: The database is reviewed by entities involved in or conducting habitat restoration projects in the Lower Columbia River watershed. The database is maintained annually, reviewed internally, distributed to regional entities conducting habitat restoration, and referenced when reporting several times annually.

Data Quality Reviews: The Regional Restoration Project Inventory is a database and reporting tool that employs the available level of project detail by multiple agencies and organizations. This tool is used internally and amongst agencies and organizations conducting habitat restoration in the Lower Columbia River watershed, therefore peer reviews, audits, and reports by external groups are not applicable.

Data Limitations: Potential data limitations include: (a) inconsistencies in or non-standard methods of acreage measurement, due to multiple agencies and organizations reporting; (b) inaccuracies due to imprecise measurement of acreage; (c) significant variability in the data, due to advancements in acreage calculation methods and therefore variable accuracy over time; (e) incomplete or inaccurate data from agencies and organizations that choose not to submit or review project data.

Error Estimate: Based on the level of involvement from agencies and organizations conducting habitat restoration in the Lower Columbia River, the quantitative estimate of actual performance and calculation of error in the database is not possible.

New/Improved Data or Systems: The tracking of habitat restoration project data in the Lower Columbia River watershed will improve with the advancement of tracking technologies, including GIS analysis, and the maintained communication with agencies and organizations conducting habitat restoration in the watershed. The management of the database will adapt to these advancements when technically and feasibly possible.

References: Lower Columbia River Restoration Inventory can be found at: http://www.lcrep.org/habitat_inventory.htm

FY 2009 Performance Measure:

- **Clean-up acres of known contaminated sediments.**

Performance Database: EPA's Regional Office will maintain a database of Columbia River data from the sources described below. Clean-up data are likely to be generated at Bradford Island, managed by the U.S. Army Corps of Engineers and the Oregon Department of Environmental Quality (ODEQ); Portland Harbor, an EPA Superfund site; and other small RCRA clean-up sites managed by ODEQ on the Columbia River.

Data Source: Information will be collected from state, federal and local agency partners. Information from the Bradford Island clean-up will be collected by the U.S. Army Corps of Engineers and the Oregon Department of Environmental Quality (ODEQ). Information from the Portland Harbor Superfund site will be collected by EPA and other partners. Information from RCRA clean-up sites will be collected by ODEQ. EPA directly oversees the work at Superfund sites; for clean-up sites managed by other entities, like the Corps of Engineers, EPA accepts the information received but does not independently verify the information.

Methods, Assumptions and Suitability: Acres are the unit of measurement used. Acreage reporting will be from EPA for Superfund work efforts and for non-Superfund work, acreage will be provided by state, federal and local agency partners.

QA/QC Procedures: EPA's Regional staff collect primary data based on site documents related to individual clean-up activities. EPA directly oversees the work at Superfund sites; for clean-up sites managed by other entities, like the Corps of Engineers, EPA accepts the information received but does not independently verify the information. There are Quality Assurance Project Plans (QAPPs) for individual sediment clean-up projects.

Data Quality Review: Sediment clean-up projects, such as those included under this measure, are very expensive. Closely managed construction projects are carried out by contractors under strict oversight by responsible parties (e.g., the Corps). The actual clean-up work is carefully overseen by parties with huge financial interests at stake and there is little realistic opportunity for significant error in counting acres addressed. Also, there is close monitoring of sediment data quality, as this is an objective of these clean-up projects.

Data Limitations: The actual clean-up work is carefully overseen by parties with huge financial interests at stake and there is little realistic opportunity for significant error in counting acres

addressed. There is close monitoring of sediment data quality, as that is the objective of these cleanup projects.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: N/A

References: http://www.deq.state.or.us/lq/ecsi/ecsi.htm

FY 2009 Performance Measure:

- **Restore the acres of tidally- and seasonally-influenced estuarine wetlands. [Puget Sound]**

Performance Database: This measure is closely related to acres protected or restored for the National Estuary Program (NEP) measure. Puget Sound is one of 28 estuaries in the NEP. The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. The National Estuary Program On-Line Reporting Tool (NEPORT) is a web-based database that EPA developed for NEPs to submit their annual Habitat reports. Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport . Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Data Source: The Puget Sound Partnership is the current home for the Puget Sound NEP. It works with its partners to document the number of acres of habitat restored and protected. EPA conducts regular reviews of NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of habitat restored and protected may not directly correlate to improvements in the health of the habitat reported, or of the estuary overall, but it is a suitable measure of on-the-ground progress. Habitat acreage does not necessarily correspond one-to-one with habitat quality, nor does habitat (quantity or quality) represent the only indicator of ecosystem health. Nevertheless, habitat acreage serves as an important surrogate and a measure of on-the-ground progress made toward EPA=s annual performance goal of habitat protection and restoration in the NEP. "Restored and protected" is a general term used to describe a range of activities. The term is interpreted broadly to include created areas, protected areas resulting from acquisition, conservation easement or deed restriction, submerged aquatic vegetation coverage increases, permanent shellfish bed openings, and anadromous fish habitat increases.

QA/QC Procedures: Primary data are 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). The NEP staff is requested to follow EPA guidance to prepare their reports, and to verify the numbers. EPA then confirms that the national total accurately reflects the information submitted by each program. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews conducted yet.

Data Limitations: Current data limitations include: information may be reported inconsistently (based on different interpretations of the protection and restoration definitions), acreage may be miscalculated or misreported, and acreage 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 restored and protected may not directly correlate to improvements in the health of the habitat reported (particularly in the year of reporting), but is rather a measure of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where these projects are located in each NEP study area. Not only does this assist both the individual NEP and EPA in obtaining a sense of geographic project coverage, but it provides a basis from which to begin exploring cases where acreage may be double-counted by different agencies. An on-line reporting system—NEPORT-- has been developed for the NEPs= use that will assist in tracking habitat projects. EPA has taken steps to align NEPORT data fields with those of the National Estuarine Restoration Inventory (NERI) and with the President's Wetlands Initiative, developed for interagency use.

References: Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport .

FY 2009 Performance Measure:

- **Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degraded or declining water quality. [Puget Sound]**

Performance Database: This measure is related to acres protected or restored for the National Estuary Program (NEP). Puget Sound is one of 28 estuaries in the NEP. The Office of Wetlands Oceans and Watersheds has developed a standardized format for data reporting and compilation, defining habitat protection and restoration activities and specifying habitat categories. Upgrading shellfish bed classifications is included. The National Estuary Program On-Line Reporting Tool (NEPORT) is a web-based database that EPA developed for NEPs to submit their annual Habitat reports. Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport . Annual results have been reported since 2000 for the NEP (results are calculated on a fiscal year basis).

Data Source: The Puget Sound Partnership is the current home for the Puget Sound NEP. It works with its partners to document the number of acres of habitat restored and protected. With respect to shellfish bed classification the Washington State Department of Health (WDOH) is the entity that determines and tracks the status of shellfish beds. EPA conducts regular reviews of

NEP implementation to help ensure that information provided in these documents is accurate, and progress reported is in fact being achieved.

Methods, Assumptions and Suitability: Measuring the number of acres of shellfish beds with harvest restrictions lifted is not a direct measure of habitat quality, but it is a measure of improving water quality with respect to fecal coliform contamination. This acreage serves as an important surrogate for water quality and human health protection in Puget Sound.

QA/QC Procedures: The Washington Department of Health does the sampling and analysis, which forms the basis of their shellfish bed status determinations. They have established QA/QC procedures. NEP staff utilize the State reported data on areas that have been the subject of restoration efforts.

Data Quality Review: No audits or quality reviews of the primary data have been conducted by EPA.

Data Limitations: Data are limited to the commercial shellfish beds which are monitored by the WDOH.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: NEPs provide latitude and longitude data (where possible) for each project. These data are then mapped to highlight where these projects are located in each NEP study area. An on-line reporting system—NEPORT-- has been developed for the NEPs= use that will assist in tracking habitat projects.

References: Links to NEPORT can be found at: http://www.epa.gov/owow/estuaries/neport .

FY 2009 Performance Measure:

- **Remediate acres of prioritized contaminated sediments. [Puget Sound]**

Performance Database: EPA's Regional office will maintain a database of Puget Sound contaminated sediment remediation using the Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) used by the Agency's Superfund program. The CERCLIS database contains information on the types of contaminated sediments/ toxics present in selected sites, as well as some baseline data against which remediation results may be derived.

Data Source: The CERCLIS database tracks Superfund sites only. Superfund site information includes remedial designs, feasibility studies and projects at contaminated sediment sites where remedial actions plans have been implemented. The CERCLIS database also tracks Federal completions, e.g., Superfund sites where federal clean-up activities have been completed.

Methods, Assumptions and Suitability: The CERCLIS database documents the remedial actions and Federal completions of projects to clean-up Superfund sites. Within Puget Sound, a

Federal completion could correlate to a specific contaminated sediment site and the number of acres that were remediated. Actual data on the number of acres remediated will be in background documents related to the particular remediation project. Activities completed, which include prioritized contaminant remediation (removal, capping, or other remedial strategies), will count in terms of acres, or portions of an acre remediated. Other databases, such as the EPA Brownfields program database and the RCRA-Online database may be useful as additional sources of contaminated sediment remediation data for the Puget Sound sites. These additional databases may be considered in the future.

QA/QC Procedures: Primary data are prepared by the Superfund staff based on site documents related to individual clean-up activities. EPA directly oversees the work at Superfund sites. There are standard operating procedures and data control procedures applied to CERCLIS data. Data are reviewed quarterly and the data control plan is reviewed annually. There are Quality Assurance Project Plans (QAPPs) for individual sediment clean-up projects.

Data Quality Review: Sediment clean-up projects, such as those included under this measure, are very expensive. Closely managed construction projects are carried out by contractors under strict oversight by EPA. There is close monitoring of sediment data quality, as this is an objective of these clean-up projects too. EPA does periodic audits or quality reviews on Superfund site data and the CERCLIS database.

Data Limitations: At this time, data on contaminated sediment remediation within Puget Sound in the CERCLIS database are limited to sites where an EPA Superfund remediation plan has been developed and implemented. The CERCLIS database only recently began tracking the number of acres cleaned up and the specific sites where contaminated sediment remediation has occurred. A new module for tracking this site-specific data was added to the database in June 2007.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: At present, the EPA Regional office plans to use the existing CERCLIS database to manage data for the performance measure.

References: Link to the Superfund Site Information System at http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm

GOAL 4 OBJECTIVE 4

FY 2009 Performance Measures:

- **Improved protocols for screening and testing (PART Measure)**
- **Effects and exposure milestones met (PART Measure)**
- **Assessment milestones met (PART Measure)**
- **Risk management milestones met (PART Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: Annual milestones in support of the Multi-Year Plan for Endocrine Disruptors research are developed and revised during the annual budget and performance planning process. Self-assessments of progress toward completing these activities are based on the pre-defined goals.

QA/QC Procedures: Procedures are now in place to require that all annual milestones be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management.

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research milestones and outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Endocrine Disruptors Multi-Year Plan, available at: http://www.epa.gov/osp/myp/edc.pdf (last accessed on July 20, 2007)
Endocrine Disruptors PART Program Review, available at: http://www.whitehouse.gov/omb/expectmore/summary/10002280.2004.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Number of states using a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of national programs and policies (PART measure)**

Performance Database: Internal Regional EPA tracking system.

Data Source: Data are derived from internal assessments of state activities.

Methods, Assumptions and Suitability: Data for this measure are collected based on assessments of the number of states using Environmental Monitoring and Assessment Program (EMAP) data to monitor the condition of ecological resources. EMAP data are generated, in part, by a cooperative agreement with twenty-three states to conduct the National Coastal Assessment Monitoring survey, which introduces a standard protocol for monitoring the

ecological condition of estuaries; including, probabilistic sampling designs, response designs for indicators, laboratory analyses, statistical analyses and reporting formats.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: EPA anticipates by 2007 all states will have adopted and implemented the National Coastal Assessment Monitoring survey. Improvements in the management of contracts, coordination of the shipment of samples, and distribution of resulting data are now performed by EPA to give states without capability the opportunity to partner with the agency.

References: EMAP data, available at: http://www.epa.gov/docs/emap/index.html (last accessed on July 20, 2007)
US EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan, 2001-2004. EPA/620/R-01/002. Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL.
Ecological Research PART Program Review, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2005.html (last accessed August 16, 2007)

FY 2009 Performance Measures:

- **Percentage of planned outputs delivered in support of public health outcomes long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of mechanistic data long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the aggregate and cumulative risk long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal (PART Measure)**
- **Percentage of planned outputs delivered in support efficient and effective clean-ups and safe disposal of contamination wastes.**
- **Percentage of planned outputs delivered in support of water security initiatives**
- **Percentage of planned outputs delivered in support of risk assessors and decision-makers in the rapid assessment of risk and the determination of cleanup goals and procedures following contamination.**
- **Percentage of planned outputs delivered on time in support of establishment of the environmental National Laboratory Response Network**

- **Percentage of planned outputs delivered in support of HHRA health assessments. (PART Measure)**
- **Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents (PART Measure)**
- **Percentage of planned outputs delivered in support of HHRA Technical Support Documents (PART Measure)**
- **Percentage of planned outputs delivered. (PART Measure)**
- **Percent progress toward completion of a framework linking global change to air quality. (PART Measure)**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for causal diagnosis tools and methods to determine causes of ecological degradation and achieve positive environmental outcomes. (PART Measure)**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental forecasting tools and methods to forecast the ecological impacts of various actions and achieve positive environmental outcomes (PART Measure).**
- **Percentage of planned outputs delivered in support of State, tribe, and relevant EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services to achieve positive environmental outcomes (PART Measure).**
- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to prioritize testing requirements; enhance interpretation of data to improve human health and ecological risk assessments; and inform decision-making regarding high priority pesticides and toxic substances (PART Measure).**
- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data for probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants (PART Measure).**
- **Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to make decisions related to products of biotechnology (PART Measure).**

Performance Database: Integrated Resources Management Systems (internal database) or other internal tracking system.

Data Source: Data are generated based on self-assessments of completion of planned program outputs.

Methods, Assumptions and Suitability: To provide an indication of progress towards achievement of a program's long-term goals, each program annually develops a list of key research outputs scheduled for completion by the end of each fiscal year. This list is finalized by the start of the fiscal year, after which no changes are made. The program then tracks quarterly the progress towards completion of these key outputs against pre-determined schedules and

milestones. The final score is the percent of key outputs from the original list that are successfully completed on-time.

QA/QC Procedures: Procedures are now in place to require that all annual outputs be clearly defined and mutually agreed upon within ORD by the start of each fiscal year. Progress toward completing these activities is monitored by ORD management

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the research outputs being measured. However, long-term performance measures and independent program reviews are used to measure research quality and impact. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Multi-Year Plan, available at: http://epa.gov/osp/myp/hh.pdf (last accessed July 20, 2007).
Global Change Research Multi-Year Plan, available at: http://epa.gov/osp/myp/global.pdf (last accessed July 20, 2007)
Human Health Risk Assessment Multi-Year Plan, available at: http://epa.gov/osp/myp/hhra.pdf (last accessed July 20, 2007).
Safe Pesticides/Safe Products Multi-Year Plan, available at: http://epa.gov/osp/myp/sp2.pdf (last accessed July 20, 2007)
Ecological Research Multi-Year Plan, available at: http://epa.gov/osp/myp/eco.pdf (last accessed July 20, 2007)
Human Health Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html (last accessed August 16, 2007)
Global Change Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004307.2006.html (last accessed August 16, 2007)
Human Health Risk Assessment PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measures:

- **Percentage of Ecological Research publications rated as highly-cited publications (PART Measure).**
- **Percentage of Ecological Research publications in "high-impact" journals (PART Measure).**
- **Percentage of Human Health program publications rated as highly cited papers (PART Measure).**

- **Percentage of SP2 publications rated as highly cited publications (PART Measure).**
- **Percentage of SP2 publications in "high impact" journals (PART Measure).**

Performance Database: No internal tracking system.

Data Source: Searches of Thomson Scientific's *Web of Science* and *Scopus* are conducted to obtain "times cited" data for programs' publications. Analyses are completed using Thomson's *Essential Science Indicators (ESI)* and *Journal Citation Reports (JCR)* as benchmarks. *ESI* provides access to a unique and comprehensive compilation of essential science performance statistics and science trends data derived from Thomson's databases.

Methods, Assumptions and Suitability: For influence and impact measures, *ESI* employs both total citation counts by field and cites per paper scores. The former reveals gross influence while the latter shows weighted influence, also called impact. *JCR* is a recognized authority for evaluating journals. It presents quantifiable statistical data that provide a systematic, objective way to evaluate the world's leading journals and their impact and influence in the global research community. The two key measures used in this analysis to assess the journals in which a program's papers are published are the Impact Factor and Immediacy Index. The Impact Factor is a measure of the frequency with which the "average article" in a journal has been cited in a particular year. The Impact Factor helps evaluate a journal's relative importance, especially when compared to other journals in the same field.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Analyses do not capture citations within EPA regulations and other key agency documents.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Safe Pesticides/Safe Products Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/sp_bibliometric_1206.pdf (last accessed on July 20, 2007)
Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Ecological Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/eco_full_analysis.pdf (last accessed on July 20, 2007)
Bibliometric Analysis for the U.S. Environmental Protection Agency/ Office of Research and Development's Human Health Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/human_health_bibliometric_121306.html (last accessed August 16, 2007)

Human Health Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html (last accessed August 16, 2007)
EPA Ecological Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2007.html (last accessed January 24, 2008)
EPA Pesticides and Toxics Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10009012.2007.html (last accessed January 24, 2008)

FY 2009 Performance Measure:

- **Usefulness of HHRA's Air Quality Criteria Documents (AQCDs), represented by the number of days between the completion of AQCD peer review and publication of the EPA staff document that relies on the AQCD.**

Performance Database: N/A

Data Source: Data are generated based on internal tracking of the time between completion of AQCD peer review and publication of the EPA staff document.

Methods, Assumptions and Suitability: To provide an indication of the usefulness of HHRA's AQCDs, the program tracks the time between completion of AQCD peer review and publication of the EPA staff document. The program aims to complete peer review at least 60 days prior to publication of the draft Staff Paper for all AQCDs over the 5 year period 2006 - 2010. The goal is to achieve 100% coverage of Agency needs by 2010.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data derived from this measure serve as a proxy for determining the utility of HHRA's Air Quality Criteria Documents (AQCDs) for the EPA staff document.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Risk Assessment PART Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Average cost to produce Air Quality Criteria/Science Assessment documents (Efficiency Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-tracking of cost per Air Quality Criteria/ Science Assessment document.

Methods, Assumptions and Suitability: The HHRA Program's efficiency measure tracks the cost to produce AQCDs for use by the Office of Air and Radiation in developing their policy options for the NAAQS. Total FTE and extramural dollar costs are cumulated over a five year period and divided by the number of AQCDs produced in this time period, to create a moving annual average $/AQCD.
QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the program activities. However, other performance measures and independent program reviews are used to measure the quality and impact of the program.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Risk Assessment PART Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2009 Performance Measure:

- **Average time (in days) to process research grant proposals from RFA closure to submittal to EPA's Grants Administration Division, while maintaining a credible and efficient competitive merit review system (as evaluated by external expert review) (Efficiency Measure)**

Performance Database: N/A

Data Source: Data are generated based on self-tracking of grants processing time.

Methods, Assumptions and Suitability: The Human Health Program's efficiency measure tracks the average time to process and award grants.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Data do not capture the quality or impact of the program activities. However, other performance measures and independent program reviews are used to measure the quality and impact of the program.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

FY 2009 Performance Measure:

- **Percent variance from planned cost and schedule (PART Efficiency Measure)**

Performance Database: Integrated Resources Management System (internal database).

Data Source: Data are generated based on 1) self-assessments of progress toward completing research goals, and 2) spending data.

Methods, Assumptions and Suitability: Using an approach similar to Earned Value Management, the data are calculated by: 1) determining the difference between planned and actual performance for each long-term goal (specifically, determining what percent of planned program outputs were successfully completed on time), 2) determining the difference between planned and actual cost for each long-term goal (specifically, determining the difference between what the program actually spent and what it intended to spent), and 3) dividing the difference between planned and actual performance by the difference between planned and actual cost.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Program activity costs are calculated through both actual and estimated costs when activities are shared between programs. Performance data reflects only the key program outputs, and does not include every activity completed by a program. Additionally, completion rates of research outputs are program-generated, though subject to ORD review.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Global Change Research PART Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004307.2006.html (last accessed August 16, 2007)

GOAL 5 OBJECTIVE 1

FY 2009 Performance Measures:

- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions [PART]**
- **Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated [PART]**
- **Percentage of concluded enforcement cases requiring implementation of improved environmental management practices [PART]**
- **Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded enforcement actions (i.e., injunctive relief and SEPs)**
- **Pounds of pollutants estimated to be reduced, treated, or eliminated as a result of audit agreements [PART]**

Performance Databases: The Integrated Compliance Information System Federal Enforcement & Compliance (ICIS FE&C) database tracks EPA judicial and administrative civil enforcement actions. Criminal enforcement cases are tracked by the Criminal Case Report System (CCRS) which became operational in FY 2006.

Data Source: Most of the essential data on environmental results in ICIS FE&C is collected through the Case Conclusion Data Sheet (CCDS), which Agency staff begin preparing after the conclusion of each 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. Information from the CCDS is used to track progress for several of the performance measures. The CCDS form consists of 22 specific questions which, when completed, describe specifics of the case; the facility involved; 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 documents whether the defendant/respondent, in response to an order for injunctive relief or otherwise in response to the enforcement action, will: (1) implement controls that will reduce pollutants; and/or (2) improve environmental management practices to curtail, eliminate or better monitor and handle pollutants in the future.

The Criminal Enforcement Program also collects annual information on pollution reductions for concluded criminal prosecutions on a separate case conclusion data form.

Methods, Assumptions and Suitability: For enforcement actions which result in pollution reductions, staff estimate the amount of pollution reduced for an immediately implemented improvement, or for an average year once a long-term solution is in place. There are established procedures to be used by EPA staff to calculate, by statute, e.g., Clean Water Act (CWA), the pollutant reductions or eliminations. The calculation determines the difference between the current Aout of compliance@ quantity of pollutants released and the post enforcement action Ain compliance@ quantity of pollutants released. This difference is then converted into standard units of measure.

QA/QC Procedures: QA/QC procedures [See references] are in place for both the CCDS and ICIS FE&C data entry. There is a CCDS Training Booklet [See references] and a CCDS Quick Guide [See references], both of which have been updated and distributed throughout regional and headquarters= offices. The criminal enforcement program has prepared a companion guide for use by its field agents. Separate CCDS Calculation and Completion Checklists [See references] are required to be filled out when the CCDS is completed. Criminal enforcement measures are quality assured by the program at the end of the fiscal year.

Quality Management Plans (QMPs) are prepared for each office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance's (OC) QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI) and is required to be re-approved in 2008. To satisfy the Government Performance and Results Act (GPRA), the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement, OECA instituted a requirement for semiannual executive certification of the overall accuracy of ICIS information. In addition, in FY 2003, OC established a quarterly data review process to ensure timely input, data accuracy, and reliability of EPA's enforcement and compliance information.

Data Quality Review: Information contained in the CCDS and ICIS FE&C are required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. ICIS data are quality-reviewed quarterly, and reviewed and certified at mid-year and end-of-year.

Data Limitations: Pollutant reductions or eliminations reported in CCDS are projected estimates of pollutants to be reduced or eliminated if the defendant carries out the requirements of the settlement. (Information on expected outcomes of state enforcement is not available.) The estimates are based on information available at the time a case is settled or an order is issued. In some instances, this information will be developed and entered after the settlement, during continued discussions over specific plans for compliance. Because of the time it takes to agree on compliance actions, there may be a delay in completing the CCDS. Additionally, because of unknowns at the time of settlement, different levels of technical proficiency, or the nature of a case, OECA=s expectation is that the overall amount of pollutants to be reduced or eliminated will be prudently underestimated based on CCDS information.

Error Estimate: Not available

New & Improved Data or Systems: In November 2000, EPA completed a comprehensive guide on the preparation of the CCDS estimates. This guide, issued to headquarters and regional staff, was made available in print and CD-ROM, was supplemented in FY 2002 and updated in FY 2004. The guide contains work examples to ensure better calculation of the amounts of pollutants reduced or eliminated through concluded enforcement actions.

ICIS FE&C became operational in June 2006. This new data system has all of the functionality of old ICIS (ICIS 1.0) but also has an added feature for tracking EPA enforcement and compliance activities. In addition, another component of ICIS, "ICIS-NPDES" is being phased-in as the database of record for the CWA National Pollutant Discharge Elimination System (NPDES) program and it includes all federal and state enforcement, compliance and permitting

data. States are currently being migrated to ICIS NPDES from the legacy data system, the Permit Compliance System (PCS). States are being phased-in to ICIS-NPDES in accordance with their current data and system capabilities and the completed migration process is projected to be completed in FY2009. As a state's data is migrated from PCS to ICIS-NPDES, so too is its NPDES federal compliance and enforcement data. ICIS-NPDES will have a new feature that did not exist in the legacy system and that is the capability to accept electronic data directly from facilities. This new data reporting function is expected to increase data accuracy and timeliness. To date ICIS-NPDES has become the national system of record for 21 states, 2 tribes, and 9 territories.

References: Quality Assurance and Quality Control procedures: Data Quality: Life Cycle Management Guidance, (IRM Policy Manual 2100, dated September 28, 1994, reference Chapter 17 for Life Cycle Management). CCDS: CCDS, Training Booklet, issued November 2000; Quick Guide for CCDS, issued November 2000, and "Guide for Calculating Environmental Benefits of Enforcement Cases: FY2005 CCDS Update" issued August 2004 available: http://intranet.epa.gov/oeca/oc/resources/ccds/ccds.pdf. Information Quality Strategy and OC=s Quality Management Plans: Final Enforcement and Compliance Data Quality Strategy, and Description of FY 2002 Data Quality Strategy Implementation Plan Projects, signed March 25, 2002. ICIS: U.S. EPA, OECA, ICIS Phase I, implemented June 2002. Internal EPA database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA). Criminal Enforcement Division Case Conclusion

FY 2009 Performance Measure:

- **Percentage of regulated entities taking complying actions as a result of on-site compliance inspections and evaluations**

Performance Databases: ICIS FE&C and manual reporting by regions.

Data Sources: EPA regional offices, Office of Civil Enforcement - Air Enforcement Division (Mobile Source program), Office of Compliance - Agriculture Division (Good Laboratory Practices), and the Compliance Assessment and Media Programs Division (Wood Heaters).

Methods, Assumptions and Suitability: The Inspection Conclusion Data Sheet, (ICDS) is used to record key activities and outcomes at facilities during on-site inspections and evaluations. Inspectors use the ICDS form while performing inspections or investigation to collect information on on-site complying actions taken by facilities, deficiencies observed, and compliance assistance provided. The information from the completed ICDS form is entered into ICIS or reported manually. This measure was selected because it directly counts the complying actions taken by the facility to address deficiencies communicated by the inspector during on-site inspections/evaluations. ICDS data can be used to identify trends and generate targeting strategies.

QA/QC Procedures: The ICIS FE&C data system has been developed per Office of Environmental Information 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: The information in the CCDS, ICDS and ICIS FE&C is required by policy to be reviewed by regional and headquarters= staff for completeness and accuracy. In FY2003, to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information. ICIS FE&C data are reviewed quarterly and certified at mid-year and end of year.

Data Limitations: ICIS FE&C is the official database of record for all inspections not reported into the legacy data bases (with the exception of some regions participating in the Underground Injection Control (UIC) database pilot who must still report manually). Legacy databases still operational include Air Facility System (AFS), RCRAInfo, and PCS for those states not migrated over to ICIS-NPDES.

New & Improved Data or Systems: In June FY 2006, a new version of the ICIS data system, ICIS FE&C became operational. The new data system has all of the functionality of old ICIS (ICIS 1.0) but adds functionality for tracking EPA enforcement and compliance activities. Further, ICIS-NPDES is beginning to replace the PCS as the database of record for the NPDES program, including all federal and state enforcement, compliance and permitting data. States are being phased-in to ICIS-NPDES in accordance with their current data and system capabilities and the completed migration process is projected to be completed in FY 2009.

References:

- ICIS: U.S. EPA, OECA, ICIS FE&C, implemented June 2006
- ICIS: U.S. EPA, OECA, ICIS-NPDES, implemented June 2006
- Memo dated October 11, 2005: Entering Manually Reported Federal Inspections into ICIS in FY 2006
- Internal EPA database
- Non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA).

FY 2009 Performance Measures:

- **Percentage of regulated entities receiving direct compliance assistance from EPA reporting that they improved environmental management practices as a result of EPA assistance**
- **Percentage of regulated entities receiving direct assistance from EPA reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance**

Performance Database: EPA headquarters and regions will manage data on regulated entities receiving direct compliance assistance from EPA through ICIS.

Data source: Headquarters and EPA=s regional offices will enter information in ICIS upon completion and delivery of media and sector-specific compliance assistance including

workshops, training, on-site visits and distribution of compliance assistance tools. ICIS 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.

Methods, Assumptions and Suitability: Compliance Assistance (CA) measures are automatically produced in the ICIS database which records the number of entities that received direct assistance from EPA and report that they improved an environmental management practice and/or report that they reduced, treated or eliminated pollution as a result of EPA assistance. The Compliance Assistance Conclusion Data Sheet (CACDS) was created to facilitate entry of data in ICIS on the on-site CA visits. ICIS produces the percentage by dividing the number of respondents to each of two follow-up survey questions by the number of respondents for each question who answered affirmatively. The figure is aggregated nationally from the regional data. A percentage measure was chosen to track the goal for year to year comparability as opposed to a direct number which varies year to year.

QA/QC: Automated data checks and data entry guidelines are in place for ICIS.

Data Quality Review: Information contained in the ICIS is reviewed by regional and headquarters staff for completeness and accuracy. In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement. ICIS data are reviewed quarterly and certified at mid-year and end of year.

Data Limitations: At the request of OMB, OECA has agreed to add language to caveat CA results in EPA's annual *Performance and Accountability Report*. The language will explain that our GPRA performance measures are not calculated from a representative sample of the regulated entity universe. The percentages are based, in part, on the number of regulated entities that answer affirmatively to questions on our voluntary surveys and do not account for the number of regulated entities who chose not to answer these questions or a survey.

Error Estimate: None

New & Improved Data or Systems: EPA continues to improve and/or modify elements of the compliance assistance module in ICIS based on use of the system. OECA will conduct a study and develop a strategy to use statistically valid techniques to tie outcomes to EPA-provided compliance assistance activities. Beginning with a pilot survey in FY 2008, EPA will conduct a survey every three years of a statistically-valid sample of compliance assistance recipients to measure behavior changes resulting from compliance assistance.

References: US EPA, ICIS Compliance Assistance Module, February 2004; US EPA, Compliance Assistance in the Integrated Compliance Information System Guidance, February 20, 2004. US EPA, 2005 Guidance Addendum for Reporting Compliance Assistance in the ICIS, March 2005.

GOAL 5 OBJECTIVE 2

FY 2009 Performance Measures:

- Number of pounds of reduced (in millions) of priority chemicals as measured by National Partnership for Environmental Priorities members.
- **Number of pounds of priority chemicals reduced from the environment per Federal government costs [PART efficiency measure]**

Performance Database: Under Information Collection Request no. 2050-0190 ("Reporting Requirements Under EPA's National Partnership for Environmental Priorities", renewed April 2006) the National Partnership for Environmental Priorities (NPEP) program collects information on partner (mostly from the industrial sector, and one municipal facility) priority chemical reduction commitments, technical solutions proposed to achieve reductions, and actual reduction achievements. Achievements are verified through discussions between EPA waste minimization national experts and partner technical personnel, and further verified using the Toxics Release Inventory system where possible.

NPEP efficiency measure: The denominator of the efficiency measure, or the cost to perform such actions, equals program cost minus quantifiable benefit per pound of reduction. Program cost is calculated to be the cost for Federal program implementation (FTE + grant and contract funding). Industry cost is neutral. Quantifiable benefits include information collected through NPEP success stories on resource savings (e.g. water, energy) resulting from implementation of waste minimization technologies and processes.

Data Source: As part of their partnership agreement, NPEP partners provide information concerning what priority list chemicals they commit to reduce, the process through which the reduction will be achieved, and the time frame for achieving the commitment. When the commitment is achieved they provide EPA with a "success story" which identifies the actual achievement, confirms the process used to achieve the reduction, and provides additional information of interest to the general public and other technical personnel concerning how the achievement was met. Information is reviewed by EPA waste minimization national experts for reasonableness based on best professional judgment. An internal tracking system is used to track pounds committed, achievement date, and actual achievement. NPEP partner achievement data is further verified against TRI reporting when the partner is a TRI regulated facility. The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), Section 313 (Toxics Release Inventory) and expanded by the Pollution Prevention Act of 1990 (40 CFR Part 13101; www.epa.gov/tri) requires that regulated facilities report facility-specific, chemical-specific release, waste and recycling data to EPA.

Methods and Assumptions: Regional targets are calculated to meet the national total goal. This is a new measure which does not have comparable historical data. EPA does not intend to reconcile FY 08 results with prior years.

Additionally, when the partner is also a TRI regulated facility, achievement data are verified against TRI reporting

Suitability: EPA waste minimization national experts are trained in industrial or chemical engineering and have significant experience in evaluating industrial processes for waste minimization potential and efficiency. Their professional judgment forms the basis for accepting the applicants' waste minimization commitment and achievement.

QA/QC Procedures:

Internal tracking: EPA engineers review commitment information. In cases where commitment information is initially incomplete or lacks substantiation, EPA engineers may conduct site visits in order to make a determination that the commitment is reasonably achievable. Information on number of pounds committed for reduction, achievement date and actual achievement is reported by NPEP partners and stored in an internal NPEP tracking system. Tracking system data are periodically reviewed by EPA regional coordinators to ensure that they accurately reflects partner commitments. Corrections are made to tracking system data when they are identified.

TRI Database verification: Most facilities use EPA-certified automated Toxics Release Inventory (TRI) Form R reporting tools, which contain automated error checking mechanisms. Upon receipt of the facilities' reports, EPA conducts automated edits, error checks, data scrubs, corrections and normalization during data entry and subsequent processing. 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:

Internal Tracking data: Tracking system data are periodically reviewed by EPA regional coordinators to ensure that they accurately reflects partner commitments. Corrections are made to tracking system data when they are identified.

TRI data: 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. Use of TRI Form R by submitters and EPA's data reviews help assure data quality. The GAO Report Environmental Protection: EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention (GAO - 01 – 283, February, 2002, http://www.gao.gov/new.items/d01283.pdf), recommends that EPA strengthen the rule on reporting of source reduction activities. Although EPA agrees that source reduction data are valuable, the Agency has not finalized regulations to improve reporting of source reduction activities by TRI-regulated facilities.

Data Limitations: For both internal tracking system and TRI data, 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.

Error Estimate:

Internal Tracking: This is a new measurement tool, implemented with the 2006 – 2011 Strategic Plan. No error estimate is available at this time. However, EPA is developing an error tracking process for use in 2007 and should have an error estimate for fiscal year 2007 in early 2008.

TRI data: From the various data quality efforts, EPA has learned of several reporting issues such as incorrect assignment of threshold activities and incorrect assignment of release and other waste management quantities (EPA-745-F-93-001; EPA-745-R-98-012; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm.). For example, certain facilities incorrectly assigned a 'processing' (25,000 lb) threshold instead of an 'otherwise use' (10,000 lb) threshold for certain non-persistent, bioaccumulative and toxic (PBT) chemicals, so they did not have to report if their releases were below 25,000 lbs. Also, for example, some facilities incorrectly reported fugitive releases instead of stack releases of certain toxic chemicals.

New/Improved Data or Systems: Use of internal tracking data allows EPA to measure direct progress resulting from the NPEP program. Historically EPA has measured trends using TRI. Because TRI data are influenced by a variety of factors, including multiple EPA and State regulations, voluntary programs, and national economic trends, use of TRI did not allow EPA to directly measure program results. The internal tracking system is a limited data set and is 100% reviewed by expert engineers, is a reasonably accurate data set.

References: http://www.epa.gov/epaoswer/hazwaste/minimize/index.htm; www.epa.gov/tri/ and additional citations provided above. (EPA-745-F-93-001;EPA-745-R-98-012;http://www.epa.gov/tri/report/index.htm; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm Bureau of Economic Analysis (BEA) indices are available at http://www.bea.gov/bea/regional/gsp/.

FY 2009 Performance Measures:

- **Pounds of hazardous materials reduced by P2 program participants (PART measure)**
- **BTUs of energy reduced, conserved or offset by P2 program participants**
- **Gallons of water reduced by P2 program participants**
- **Business, institutional and government cost reduced by P2 program participants (PART measure)**

The Agency's Pollution Prevention programs, or results centers, include Green Chemistry (GC), Design for the Environment (DfE), Green Engineering (GE), Regional Offices Pollution Prevention Resource Exchange (P2Rx), Environmentally Preferable Purchasing (EPP), Partnership for Sustainable Healthcare (PSH), and Green Suppliers Network (GSN). Each of these program/results centers operate under the principles of the Pollution Prevention Act and works with others to reduce waste at the source, before it is generated. The programs are designed to facilitate the incorporation of pollution prevention concepts and principles into the daily operations of government agencies, businesses, manufacturers, nonprofit organizations, and

individuals. Each program/results center contributes outcome results which are added to the combined flow of results. Data is rolled up into a single tracking tool: "P2 Program 2011 Strategic Targets -Contributions by Program.xls," aggregating annual progress toward the goals.

Performance Database:
Green Chemistry (GC): EPA has developed an electronic metrics database ("matrix") that allows organized storage and retrieval of green chemistry data submitted to EPA on alternative feedstocks, processes, and safer chemicals. The database was designed to store and retrieve, in a systematic fashion, information on the environmental benefits and, where available, economic benefits that these alternative green chemistry technologies offer. The database was also designed to track the quantity of hazardous chemicals and solvents eliminated as well as water and energy saved through implementation of these alternative technologies. Green chemistry technology nominations are received up to December 31 of the year preceding the reporting year, and it normally takes 6-12 months to enter new technologies into the database. The database currently has information on all technologies received through 2007.

Design for the Environment (DfE): DfE has an evaluation spreadsheet that is populated for all its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, and a collaboration with the Air Office on DfE approaches as implementation mechanisms for regulating Local Area Sources, such as Auto Refinishing). Spreadsheet content varies by project, and generally includes measures comparing baseline technologies or products to safer ones, as well as information on partner adoption and/or market share of safer alternatives. For example, the DfE Formulator Program tracks the move to safer chemicals (such as pounds of chemicals of concern no longer used by partners, and conversely pounds of safer ingredients), and reductions in water and energy use, where available.

Green Engineering (GE): GE will be developing an electronic database to keep track of environmental benefits of GE projects including pounds of hazardous chemicals prevented and/or eliminated, gallons of water, British Thermal Units (BTUs) and dollars saved and pounds of carbon dioxide (CO_2) emissions eliminated.

Regional Offices: EPA's Regional Offices' (Regions) P2 results come primarily through grants they award, and results from projects managed by EPA Regional staff. Regional Offices use the GranTrack database to collect and organize information on the P2 and Source Reduction grants they award. GranTrack includes multiple information fields covering administrative and financial aspects of the grants as well as results reported by grantees. The database can be searched and reports developed in numerous ways, including by Region, type of grant, year grant awarded, and year of results. Data may be displayed for individual grants or in aggregate covering multiple grants. While GranTrack has been used for a number of years it has some limitations. This year the program is exploring options for upgrading GranTrack and/or using additional tools to simplify and improve results reporting.

Pollution Prevention Resource Exchange (P2Rx): There are 8 regional P2 Information centers which coordinate and supply information, training and conferences for local and state technical assistance providers as well as businesses. These centers report to EPA through grant reports. These 8 P2Rx centers also host regional modules that contribute to the National P2 Results

system that was developed under a grant from the EPA National Environmental Information Exchange Network (NEIEN) program. Any program can enter measures of outputs and outcomes into this data system. Over 30 state-level P2 organizations have signed Memoranda of Agreements to provide data. The P2Rx centers have trained and assisted organizations in entering their data. EPA is conducting an evaluation of P2Rx services to estimate the portion of potential customers these centers reach. EPA support of these regional centers and the technical assistance, publications, training, and information supplied by the P2Rx centers contributes to national P2 progress. To capture this indirect effect of EPA's role, 10% of the results reported through the P2Rx center will be counted in EPA performance measures.

Partnership for Sustainable Healthcare (PSH) Program: The Partnership for Sustainable Healthcare (PSH) program is the new name for EPA's continued effort with the health care sector, as the former "Hospitals for a Healthy Environment" (H2E) program (now the H2E organization has become a fully independent non-profit organization.). PSH works, in collaboration with the National Center for Manufacturing Sciences (NCMS), and H2E, as NCMS' sub-grantee, in providing technical assistance to the health care sector. H2E maintains its own electronic program database. Data are collected voluntarily from Partners on an ongoing and continuous basis. For pounds of hazardous materials, data are requested on mercury and broken down by types of waste. Information on BTUs, gallons of water, and dollar savings are only requested in award applications.

Green Suppliers Network (GSN): GSN utilizes a Customer Relationship Management database (CRM) in partnership with the National Institute of Standards and Technology's Manufacturing Extension Partnership Program (NIST MEP) to collect performance metrics for the program. The CRM was originally configured to collect economic information from companies receiving services through the NIST MEP system. The CRM has been modified to capture the environmental metrics collected during a GSN review at a company, such as the value of environmental impact savings identified, energy and water conserved, water pollution reduced, air emissions reduced, hazardous waste reduced (lbs/year), and toxic/hazardous chemical use reduced (lbs/year).

Environmentally Preferable Products (EPP): Results for Environmentally Preferable Purchasing (EPP) come from the Federal Electronics Challenge (FEC), the Electronic Product Environmental Assessment Tool (EPEAT), and Green Janitorial Products. FEC uses the FEC Administrative Database for storage and retrieval of annual reporting information from FEC partners. EPP staff run these reporting data through the Electronics Environmental Benefits Calculator to calculate pounds of hazardous pollution reduced, units of energy conserved, and costs saved (among other benefits) on an annual basis. EPEAT-registered manufacturers provide reporting data via the Green Electronics Council, which collects and organizes EPEAT reporting data. As with FEC, the EPP team runs these reporting data through the Electronics Environmental Benefits Calculator to calculate pounds of hazardous pollution reduced, units of energy conserved, and costs saved (among other benefits) on an annual basis. For Janitorial Products, the EPP team will collect annual reporting data from various EPA contacts for EPA's Environmental Management System (EMS), and then run these data through the Green Cleaning Calculator to calculate pounds of hazardous pollution reduced. FY 2007 data will be collected in January 2008.

Data Sources: *GC:* Industry and academia submit nominations annually to the Office of Pollution Prevention and Toxics (OPPT) in response to the annual Presidential Green Chemistry Challenge Awards. Environmental and economic benefit information is included in the nomination packages. Qualitative and quantitative benefit information is pulled from the nominations and entered in the metrics database. The metrics database pulls this public benefit information from the nominations. The database currently has information on all technologies nominated through 2007.

DfE: The source of DfE's evaluation information varies by the project and the partner industry. For example, in DfE's Formulator Recognition Program, partners provide proprietary information on the production volume of their improved formulations. For other partnerships, data sources typically include technical studies (e.g., Alternatives Assessments and Life-Cycle Assessments) and market/sales/adoption information from sources such as industry associations.

GE: Data come from sources and partners including the regions, academia and industry. For example, for GE projects related to the pharmaceutical industry, data will be directly reported by the project leaders. Some information may also come from profiles of recognized projects taken from technical journals or organizations, such as the American Institute of Chemical Engineers, or directly reported by project leaders on industry projects or joint academia-industry projects.

Regional Offices: P2 Grant and Source Reduction grant data are secured from grant applications, grant reports and supplemental forms and entered into the current P2 Grant Database, Gran Track. In addition, over the coming year the program is piloting the use of a new tool to assist grantees in projecting and determining grants results and to assist regional project officers in compiling and analyzing those results.

P2Rx: P2Rx center data are currently secured through the National P2 Results system, compiled through 8 Regional modules. In the future, more targeted results could be secured through web-based surveys of customers, pre and post testing of training attendees and case studies following long term impact of the use of P2Rx services and information.

PSH: Because the PSH program is a voluntary program, the information collected is voluntarily submitted by hospital Partners. The PSH program maintains an ICR for the collection of data which allows EPA to collect data from third parties under the Paperwork Reduction Act.

GSN: Data are collected by the GSN Review Team during a GSN review at the company's facility. This team consists of a "lean" manufacturing expert from the NIST MEP system and an environmental expert usually from the state environmental agency or its designee. Lean manufacturing is a business model and collection of methods that help eliminate waste while delivering quality products on time and at least cost. NIST MEP has a system of lean experts who assist businesses through the process of becoming more efficient and cost effective. The metrics are recorded in the final report generated for the company's use and also are entered into the CRM database by the NIST MEP center. All MEP centers are grantees to the Department of Commerce and must adhere to DOC's requirements for the collection and handling of data.

These requirements are reinforced by the terms of the "Request for Proposals" to which each center (e.g., grantee) responds and which must be followed during a GSN review.

EPP: For FEC, the data source is federal partners. For EPEAT, the data source is EPEAT-registered manufacturers of electronic products. For Janitorial Products, the data source is EPA EMS contacts for procuring janitorial products.

Methods and Assumptions: *GC:* The public information is tracked directly through internal record-keeping systems. Annual benefits are assumed to reoccur. The performance data, while collected by individual centers, is acceptable for the purpose of performance measurement for the program, as it addresses the specific measures and reflects an aggregated and quality reviewed dataset.

DfE: Each DfE partnership identifies and focuses on a unique set of chemicals and industrial processes. For DfE's Formulator Recognition Program, partner-provided data on production volumes is aggregated to determine the total reductions of hazardous chemicals achieved through the program. For Lead-Free Solder and Furniture Flame Retardants, market data for the production volume of the chemical of concern provides the measure for reduction. DfE's Data Program Tracking Spreadsheet includes the methods/assumptions for each project's measures.

GE: The information will be supplied directly by project leaders and/or academic-industry-region partners. The information will be tracked directly through EPA record keeping systems. GE's Data Program Tracking spreadsheet includes methods and assumptions.

Regional Offices: The data will come from state and other P2 grantees and other sources as described above. No models or assumptions or statistical methods are employed by EPA. The program is developing a new data collection tool (methodology) for grantees that is designed to increase the consistency of their data collection methods and to offer a consistent set of costing assumptions.

P2Rx: Data reported by state and local programs in the National P2 Results system will be collected and compiled by the regional centers. Some portion of these results, based on an evaluation of the portion of the customer base reached by the center in each region, will be attributed to the P2Rx center for that region. The ability to attribute environmental outcomes to Web-based information and training will rely on customer survey information and Web site user statistics.

PSH: The data comes directly from program Partners, specifically hospitals. No models or assumptions or statistical methods are employed.

GSN: The data are aggregated by NIST MEP headquarters and reported to EPA on a quarterly basis in September, December, March, and June. The data are aggregated to maintain confidentiality for all companies participating in the program. No models or statistical methods are employed.

EPP: For FEC, the program assumes that partners report accurate data. The assumptions needed for the Calculator to translate environmental attributes and activities into environmental benefits are relatively extensive and are laid out in the Calculator's inputs (e.g., the average lifecycle of a computer, the weight of packaging for a computer, etc.). The assumptions were reviewed when the Calculator underwent the peer review process. The Electronics Environmental Benefits Calculator assists institutional purchasers in: 1) measuring the environmental and economic benefits of purchasing environmentally preferable electronics; 2) enabling energy efficiency features on electronics during use; 3) extending the useful life of electronics; and 4) disposing of old electronics in an environmentally sound manner through reuse or recycling. For Janitorial Products, the method involves reporting the types of products and work practices used during routine cleaning activities in office buildings. The Green Cleaning Calculator assists in calculating pounds of hazardous pollution reduced.

Suitability: Hazardous pounds reduced, dollars saved, BTUs of energy reduced conserved or offset, and gallons of water reduced represent the four Pollution Prevention measures. These annual measures have corresponding long term goals identified in EPA's 2006-2011 strategic plan and are suitable for year to year comparisons due to the program's ability to show annual progress towards reaching these long term goals.

QA/QC Procedures: All Pollution Prevention and Toxics programs operate under the Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines, as well as under the Pollution Prevention and Toxics Quality Management Plan (QMP) ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," June 2003), and the programs will ensure that those standards and procedures are applied to this effort. The Quality Management Plan is for internal use only.

GC: Data undergo a technical screening review by the Agency before being uploaded to the database to determine if the data adequately support the environmental benefits described in the Green Chemistry Challenge Awards application. Subsequent to Agency screening, nominations are reviewed by an external independent panel of technical experts from academia, industry, government, and nongovernmental organizations (NGOs). Their comments on potential benefits are incorporated into the database. The panel is convened by the Green Chemistry Institute of the American Chemical Society, primarily for judging nominations submitted to the Presidential Green Chemistry Challenge Awards Program and selecting winning technologies. Quantitative benefits are periodically reviewed to be sure they were accurately captured from the nominations.

DfE: Data undergo a technical screening review by DfE before being added to the spreadsheet. DfE determines whether data submitted adequately support the environmental benefits described.

GE: Data will be reviewed by the partners including industry, academia, and the regions. Data will also be reviewed by GE to ensure transparency, reasonableness and accuracy.

Regional Offices: Data will undergo technical screening review by EPA Regional and Headquarters staff and their contractor before being placed into GranTrack. Data for projects managed directly by EPA Regional staff will be reviewed by Regional personnel. Additional

QA/QC steps to be developed, as appropriate. The program has been working with the regional offices this past year to develop consistent QA procedures, which can be applied at the beginning of the grant and throughout the life of the grant.

P2Rx: Data entered into the National P2 Results system will undergo technical screening review by P2Rx centers and EPA regional and Headquarters staff.

PSH: Data undergo technical screening review by the grantee (National Center for Manufacturing Sciences, which administers the program through a cooperative agreement) before being placed in the database. QA/QC plan is a part of the requirement of the cooperative agreement.

GSN: Data are collected and verified under NIST MEP's QA/QC plan. Each NIST MEP Center must follow QA/QC requirements as grantees to the Department of Commerce. Additionally, the environmental data are collected under the specific requirements of the state environmental agency participating in each GSN review. Each state agency utilizes their own QA/QC plan for data collection because they utilize the data for purposes in addition to the GSN program.

EPP:. Regarding FEC, EPEAT, and Janitorial Products, the calculators of environmental benefits (e.g., the Electronics Environmental Benefits Calculator and the Green Cleaning Calculator) underwent internal and external review during their development phases. Regarding FEC and EPEAT, instructions and guidelines are provided to partners on how to report data. Reporting forms are reviewed by EPA management when they are submitted. For EPEAT, EPEAT-registered manufacturers sign a Memorandum of Understanding in which they warrant the accuracy of the data they provide. For Janitorial Products, contractors sign a contract stating that they are providing janitorial products according to certain specifications. For FEC, EPEAT, and Janitorial Products, data undergo an internal technical review before these data are run through the calculators.

Data Quality Review: All Office of Pollution Prevention and Toxics (OPPT) programs operate under EPA's Information Quality Guidelines as found at http://www.epa.gov/quality/informationguidelines and under the OPPT's Quality Management Plan (QMP).

GC: Review of industry and academic data as documented in U.S. EPA, Office of Pollution Prevention and Toxics, Green Chemistry Program. Files available at http://www.epa.gov/opptintr/greenchemistry/

DfE: Data collected includes those from industry associations and government reports. Source data is compared with industry trends and examined by industry and NGO partners.

GE: Data collected will be reviewed to meet data quality requirements.

Regional Offices: The GranTrack metrics and data system incorporate ideas and system features from the National Pollution Prevention Results System, developed with EPA support by such organizations as the Northeast Waste Management Officials Association, Pacific Northwest

Pollution Prevention Resource Center, and National Pollution Prevention Roundtable. Data for projects managed directly by EPA Regional staff will be reviewed by Regional personnel. Data will undergo technical screening review by EPA Regional and Headquarters staff and their contractor before being placed into GranTrack. The P2 program has been working with the regional offices this past year to develop consistent QA procedures which can be applied at the beginning of the grant and throughout the life of the grant.

P2Rx: The new metrics and data system were based, in part, on recommendations in the February 2001 GAO report, "EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention" (GAO-01-283). They also incorporate work by such organizations as the Northeast Waste Management Officials Association, Pacific Northwest Pollution Prevention Resource Center, and National Pollution Prevention Roundtable.

PSH: Not applicable

GSN: Not applicable.

EPP: For FEC, data are entered on-line with an additional error-checking function on the online form. FEC staff also review the data to ensure that it is sensible, given the context. The mechanism by which the EPP program is receiving data from the Green Electronics Council is still being determined. For Janitorial Products, data quality review steps (as of 4th quarter 2006) are still under development.

Data Limitations:

GC: Nominations sometimes omit data for a given technology due to confidential business information. Nominations for the Presidential Green Chemistry Challenge Awards Program are in the public domain.. Because the Presidential Green Chemistry Challenge is a voluntary public program, it cannot routinely accept or process CBI. If the program stakeholders cannot verify a technology because of proprietary information, especially during the final judging stage of the awards program, they can and do ask EPA to conduct the verification internally. EPA will then ask the company to share confidential information with CBI-cleared OPPT staff in order for EPA to conduct the verification. It also is occasionally unclear as to what is the percentage market penetration of implemented alternative green chemistry technology (potential benefits vs. realized benefits). In these cases, the database is so noted.

DfE: Occasionally, data on innovative chemistries or technologies are claimed CBI by the developing company, thus limiting the implementation of beneficial pollution prevention practices on a wider scale.

GE: There may be instances in which environment benefits are not clearly quantified and/or available due to various reasons including CBI. In those instances, the data have to be carefully evaluated and considered for reporting. If the information is included, the uncertainties/limitations will be noted

Regional Offices: Limitations arise from the reliance on individual state and other P2 grantees and other sources to gather data. These programs vary in attention to data collection from sources within their jurisdictions, data verification and other QA/QC procedures. Also, despite changes described below to add consistent metrics and definitions, some differences exist. EPA is attempting to address these concerns by strengthening reporting requirements in its P2 grants, focusing on outcomes, and standardizing GranTrack metrics with those in the National P2 Results System. EPA is also in the process of adding a P2 component to the EPA Information Exchange Network (which provides financial support and a comprehensive data system to link state data with EPA). In addition, the program is working this year on developing and integrating new tools to assist grantees in projecting and determining results and to assist project officers in interpreting and reporting those results.

P2Rx: Limitations arise from variability in individual state and local P2 programs and their reporting sources, QA/QC procedures, and what is reported. Differences may arise in how programs quantify environmental benefits, based on state or local legislative requirements.

PSH: Not all hospital Partners have turned in their facility assessment information. However, in order to be considered for an award under the program, hospital Partner MUST submit facility information; therefore, the program has a very complete set of information for hospital Partners who have applied for awards. This introduces self-selection bias to the reported data as the hospitals with the best track records are those that apply for the awards. The program has roughly 10% of all Partner facilities' assessment data. An internal assessment conducted of data collected from Partners revealed some calculation errors and data inconsistencies regarding how waste data is captured by the hospital Partners. The program has gone back to correct some of those errors.

GSN: Limitations arise from the reliance on individual programs to gather data. These programs vary in attention to data collection from sources within their jurisdictions, data verification and other QA/QC procedures. The GSN program has attempted to address these concerns by strengthening the data collection requirements in the Request for Proposals that MEP centers must be respond to in order to perform a GSN review.

EPP: FEC and EPEAT have a built-in reliance on partners for data reporting.

Error Estimate:

GE: There may be instances in which environmental benefits are not clearly quantified. In those instances, the data will be excluded.

DfE: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

P2Rx: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

Regional Offices: Any errors detected during internal technical review of performance data submitted would be addressed, either through correction of data or elimination of data.

PSH: The program does not use a statistical approach to collect the data and therefore does not have confidence intervals for the performance estimates.

GSN: Not applicable.

GC: The program simply compiles data and does not conduct statistical analysis. Error estimates are not available.

EPP: Any errors detected during internal technical review of performance data submitted would be addressed, either through correction of data or elimination of data.

New/Improved Data or Systems:

Regional Offices: EPA recently updated and expanded GranTrack, both to improve usability and to add a much greater level of detail regarding results reported by grantees. In regard to reporting of results, GranTrack includes activity measures, behavioral measures, and outcome measures. The metrics chosen and their definitions generally are consistent with those used in the National Pollution Prevention Results System, described in the P2Rx center. Also, EPA is planning to grant the public restricted access to GranTrack. The following fields will be accessible: general information, projects and results data, status of grant, funding, keywords, partners, and sectors. The program's system for estimating and reporting results will undergo further change and improvement this coming year. We anticipate working to improve the process of projecting and reporting results through the development of new tools and methodologies. We anticipate that these changes will simplify results reporting for grantees and will improve the credibility and predictability of those results.

P2Rx: This center's survey and data collection systems are under initial implementation. Improvements will be based on the outcome of the pending evaluation

PSH: The H2E organization is in the process of commercializing a new facility assessment software which will help hospital Partners collect and compute facility environmental improvement data. The software automatically converts units and tabulates information from the hospital's source data, as well as calculating costs for different waste streams. Anticipated roll-out for the software will be in 2008. The H2E organization has agreed to share the consolidated information with EPA when data collection begins.

References:

GC: http://www.epa.gov/opptintr/greenchemistry/
DfE: http://www.epa.gov/opptintr/dfe/
GE: http://www.epa.gov/opptintr/greenengineering/
P2 Programs: http://www.epa.gov/oppt/p2home/index.htm
http://www.p2.org/workgroup/Background.cfm

http://www.epa.gov/Networkg/
PSH: http://www.epa.gov/p2/pubs/psh.htm
GSN: www.greensuppliers.gov
EPP: Information about FEC's annual reporting is on the FEC web site at:
http://www.federalelectronicschallenge.net/report.htm
Information about the Electronics Environmental Benefit Calculator is on the FEC web site at:
http://www.federalelectronicschallenge.net/resources/bencalc.htm
The EPEAT Subscriber and License Agreement is available on the EPEAT web site at: http://www.epeat.net/docs/Agreement.pdf
Regional*: http://www.epa.gov/p2/pubs/local.htm*

FY 2009 Performance Measure:

- **Percent change from baseline in reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program [PART efficiency measure]**

EPA measures the accomplishments of the Design for the Environment (DfE) Program by comparing reductions in hazardous chemicals achieved to program resources, including FTE, overhead and extramural dollars spent.

Performance Database: The DfE program has an evaluation spreadsheet that is populated for all its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, and a collaboration with the Office of Air and Radiation on DfE approaches for regulating Local Area Sources, such as Auto Refinishing). Key data elements used to calculate the efficiency measure are the quantity of hazardous chemicals reduced and spending information obtained from the OPPT Finance Central database. The efficiency measure numerator is the total pounds of hazardous chemicals reduced and the denominator is the annual DfE program resources expended.

Data Source: The source of DfE's evaluation information varies by the project and the partner industry. For example, in DfE's Formulator Recognition Program, partners provide proprietary information on the production volume of their improved formulations. For other partnerships, data sources typically include technical studies (e.g., Alternatives Assessments and Life-Cycle Assessments) and market/sales/adoption information from sources such as industry associations. Resource data are from OPPT Finance Central

Methods, Assumptions: Each DfE partnership identifies and focuses on a unique set of chemicals and industrial processes. For DfE's Formulator Recognition Program, partner-provided data on production volumes are aggregated to determine the total reductions of hazardous chemicals achieved through the program. For Lead-Free Solder and Furniture Flame Retardants, market data for the production volume of the chemical of concern provide the measure for reduction. DfE's Data Program Tracking Spreadsheet includes the methods/assumptions for each project's measures. Program resources are calculated directly

from EPA figures. The efficiency measure corresponds directly to the program goal of cost-effectively reducing hazardous chemical use and can compare cost effectiveness year–to-year.

Suitability: Hazardous pounds reduced is one of four Pollution Prevention annual measures which have corresponding long term goals identified in EPA's 2006-2011 Strategic Plan and are suitable for year to year comparisons due to the program's ability to show annual progress towards reaching the long term goals. The indicators used for this measure are suitable because reductions in cost per pound of hazardous chemicals reduced are expected to result from improvements in program implementation. These cost reductions will enable EPA to achieve the goals of the Design for the Environment program with greater efficiency.

QA/QC Procedures: Design for the Environment operates under EPA's Information Quality Guidelines as found at http://www.epa.gov/oei/qualityguidelines/index.html and under the OPPT Quality Management Plan.

Data Quality Reviews: Data undergo a technical screening review by DfE staff before being added to the program tracking spreadsheet.

Data Limitations: The data submitted voluntarily by partners are confidential. The information made public information is limited to aggregated values.

Error Estimate: Due to the sampling methodology, no error estimate is possible.

New/Improved Data or Systems: Each year additional data are added to the program tracking spreadsheet and averaged with preceding years. Cumulative data will provide a more stable estimate of total pounds of hazardous chemicals reduced through the DfE program.

References:
http://www.epa.gov/oei/qualityguidelines/index.html

The DfE Program Tracking Spreadsheet contains Confidential Business Information.

FY 2009 Performance Measures:

- **Reduce water use at Performance Track facilities**
- **Reduce hazardous materials use at Performance Track facilities**
- **Reduce production of greenhouse gases at Performance Track facilities**
- **Reduce toxic releases to water at Performance Track facilities**
- **Reduce combined NOx, SOx, VOC and PM emissions at Performance Track facilities**

Performance Databases: In 2003, EPA developed an electronic database, Performance Track On-Line (a Domino database) which facilities use to electronically submit their environmental performance data. The data are stored in Performance Track Online as well as in the Performance Track Members Database (a Microsoft Access database).

Members report on results in a calendar year. Fiscal year 2009 data represents members' calendar year 2008 performance. That data will be reported to the Performance Track program by April 1, 2009. The data will then be reviewed, aggregated, and available for external reporting in September 2009. (Calendar year 2009 data will become available in September 2008.)

Data Source: All data are self-reported and self-certified by member facilities. As described below, Performance Track engages in quality control to the extent possible, but it does not conduct formal auditing. However, as described below, Performance Track staff visit up to 10% of Performance Track member facilities each year. In addition, a criterion of Performance Track membership is the existence of an environmental management system (EMS) at the facility, a key element of which is a system of measurement and monitoring. Performance Track facilities are required to have independent audits of their EMSs, which create a basis for confidence in the facilities' data.

Methods, Assumptions, and Suitability: Data collected from members' applications and annual performance reports are compiled and aggregated for the externally-reported indicators. Performance Track members commit to two to four environmental improvements, selected from a comprehensive list of environmental indicators. Facilities then report on their performance in these indicators over a three-year period of participation. Because facilities choose the areas in which they will report, the externally reported indicators (listed above) may or may not be included in any particular facility's set of reported indicators. If a facility does not include one or more of the above indicators as one of its goals, then its performance for that indicator, either positive or negative, will not be included in EPA's aggregated data for the indicator.

The data reflect the performance results across the entire facility, and are thus considered "facility-wide" improvements. Members are not permitted to report on environmental improvements for a subset of the facility; rather, the data reported must represent the performance for the given indicator across the entire facility. Performance Track staff ensures that all improvements are facility-wide by conducting a thorough technical review of the submitted performance data. Any data that are determined to not reflect the entire facility's performance is either revised or excluded from the aggregated and externally reported results. EPA believes that this review process minimizes instances of reporting on non-facility wide improvements.

The data are normalized for production rates or other rates of output at the facilities. Normalized results take into account production or output changes at facilities.

The data can be used to make year-to-year comparisons, but reviewers and analysts should bear in mind that Performance Track membership is constantly in flux. Although members should retain the same set of indicators for their three-year participation period, as new members join the program and others leave, the group of facilities reporting on each indicator constantly changes. In a few instances, members make replacement goals due to closure of certain product lines or other major business changes.

Due to unavoidable issues regarding the timing of the application period, a small subset of reported data will represent performance improvements over two years for the facilities' first reporting year.

Reductions in greenhouse gas emissions are estimated based on facilities' reductions in energy use. To estimate greenhouse gas emissions from energy use, Performance Track uses EPA's Power Profiler tool (http://www.epa.gov/solar/powerprofiler.htm), which uses emission factors from the EPA database Emissions & Generation Resource Integrated Database (eGRID).

QA/QC Procedures: Performance data submitted to the program are reviewed for completeness and adherence to program requirements, and undergo a technical screening review by EPA and contractor staff. The quality of the data, however, is dependent on the quality of the measurement or estimation at the facility level. In cases where it appears possible that data is miscalculated or misreported, EPA or contractor staff contact the facility and request resubmittal of the data. If the accuracy of data remains under question or if a facility has provided incomplete or non-standard data, the database is coded to ensure that the data is excluded from aggregated and externally reported results.

As described, Performance Track is quality controlled to the extent possible, but is not audited in a formal way. However, Performance Track staff visit up to 10% of Performance Track member facilities each year. During those visits, facilities are asked about their data collection systems and about the sources of the data reported to the program. Additionally, a prerequisite of Performance Track membership is an environmental management system (EMS) at the facility, a key element of which is a system of measurement and monitoring. Performance Track facilities are required to have independent audits of their EMSs, which increases confidence in the facilities' data. The independent assessment became a requirement in 2004.

Data Quality Reviews: N/A.

Data Limitations: Potential sources of error include miscalculations, faulty data collection, misreporting, and nonstandard reporting on the part of the facility. It is clear from submitted reports that some facilities estimate or round data. Also, errors are made in converting units and in calculations. As mentioned above, in cases where EPA identifies the possibility for these types of errors, the facility is asked to resubmit the data. In general, EPA is confident that the externally reported results are a fair representation of members' performance.

Error Estimate: Not calculated.

New/Improved Performance Data or Systems: Since spring 2004, all Performance Track applications and annual performance reports have been submitted electronically (through the Performance Track On-Line system), thus avoiding the need for manual data entry. This has also allowed for improved standardization of data collection. Additionally, the program has implemented a new requirement that all members receive an independent assessment of their EMSs prior to membership. Lastly, the program has reduced the chances that data may not reflect facility-wide data by addressing the issue in the review process and by instituting "facility-wide data" requirements for all indicators.

References: Members' applications and annual performance reports can be found on the Performance Track website at https://yosemite.epa.gov/opei/ptrack.nsf/faMembers?readform. *Performance Track On-Line* and the *Performance Track Members Database* are not generally accessible. Performance Track staff can grant access to and review of the databases by request.

FY 2009 Performance Measure:

- 75% of innovation projects under the State Innovation Grant Program and other piloting mechanisms will achieve, on average, 8.0% or greater improvement in environmental results **from a project initiation baseline measure for the sectors and facilities** (e.g., reductions in air or water discharges, improvements in ambient water or air quality, or improvements in compliance rates) or a 5% or greater improvement in cost-effectiveness and efficiency. In FY09, six (6) projects will be reaching completion, at which point they are evaluated, and the target is for four (4) to meet the performance goal.

Performance Databases: The Office of Environmental Policy Innovation (OEPI) maintains an EPA-internal database, the "State Innovation Grant Database" (a Lotus Notes - Domino database) to retain and organize data on competition, award and project performance for its State Innovation Grant Program. The data base is managed by OPEI and access within the Agency can be granted to EPA project officers and program officials. In the past, we have granted access to this database to the Office of the Inspector General for use in a program evaluation. Data entry is performed by staff within OEPI. Within the sections on project performance, the database includes all available quarterly project progress reports and final project reports. Quarterly reports are timed to the lifecycle of an individual project rather than all projects on a fixed date. These reports include document in MS Word and WordPerfect formats as well as spreadsheets, all generated by the State Grant recipients to track their project milestones identified in the final project work plan. Beginning in 2007, OPEI began using the data to generate a regular performance report for the State Innovation Grant program. The projects funded by the grant program typically have a 2-4 year lifetime and during that period, each project reports on a quarterly basis and provides a final project outcome report at the termination of the project.

Projects implemented under the State Innovation Grant Program typically do not show measurable environmental outcomes until the programs initiated under the grants are fully implemented. For example, a State implementing an Environmental Results Program for a particular business sector may take up to three years to develop the compliance assistance program and operator manuals, conduct a baseline assessment of performance, implement the compliance assistance workshops, provide adequate time for businesses to fully adopt the program and then conduct a performance assessment for a statistical sample of hundreds of facilities state-wide. Dates captured in the project quarterly reports provide information on attainment of operational milestones and outputs. The final reports are expected to provide measurement of first, second or third order outcomes to assess the success of the project. This is significant because outcome measurement is not possible until the grant project is completed. Only milestones and output measurements (e.g., development of a compliance handbook,

compliance assistance workshops) are available during the operation of the individual projects. Thus, performance assessment occurs only at the end of a project. Projects we will report on in 2009 are projects initiated in 2005 and 2006.

Data Source: Data on performance are reported by the States for projects funded under the State Innovation Grant Program. Data are collected by the States using a variety of mechanisms depending upon the specific projects. For instance, for Environmental Results Programs (ERPs), the State prepares a compliance manual for a specific business sector and a compliance worksheet. Participating operators self-certify their performance using the worksheet and its checklist. The States audit statistically random samples of the participating facilities and certify the performance of these facilities independently. States are required to report only composite data for these projects. Other types of projects may rely on a facility's environmental monitoring conducted under a permit to certify performance. Only rarely are new data required for a State Innovation Grant Program project. We rely heavily on existing performance assessments conducted under permitting programs to assess baseline and outcome performance improvement. For instance, the grant program has funded several facility environmental management systems (EMS). Facilities typically have independent third-party audits of their EMSs, which create a basis for confidence in the facilities' data. In general EPA is confident that the externally reported results are a fair representation of members' performance.

Methods, Assumptions, and Suitability: Performance assessment methods will vary across project types in this program. For instance, ERPs focus on improvement in compliance rates and program efficiency. Compliance rates are determined by a statistically-based sample audit of participating facilities within an ERP sector by the State. Currently, the State Innovation Grant program is sponsoring ERP projects in a number of business sectors (dry cleaning, printing, auto body repair, auto salvage, Underground Storage Tanks (USTs), Injection Wells, Concentrated Animal Feeding Operations (CAFOs), Oil and Gas well drilling and operation, storm water management, etc). Some of these facilities will report compliance based upon operational processes. Others may be able to go beyond compliance reporting and provide estimates of pollution prevention (e.g., reduction in VOC emissions in pounds).

Other project types, such as Environmental Management Systems will typically will utilize facility monitoring protocols developed for their permits and use those to develop assessments of improvements in emissions and discharges. Where EMS-driven projects also develop engineering estimates of improvements in pollutant discharges brought about by manufacturing changes, those estimates would require verification related to any alteration in permits.

Analysts should bear in mind that these projects almost never produce incremental improvements across their lifetime (e.g., in a 3-year project, one third of the projects proposed benefits will not occur in each year. Rather, project outcomes are generally measurable only at the completion of the project which marks full implementation. In a number of instances, full implementation may require time beyond the grant-funded project period. In these instances we have sought commitments from recipient-states to continue measuring performance and reporting to EPA after the grant project itself has been completed. The significant impact on the State Innovation Grant program is that outcomes reported in any year will reflect completion of projects initiated

2-4 years earlier and not incremental benefits during the lifetime of a project. Thus, reporting of outcomes in 2009 will be based upon projects funded in FY 2005 and FY 2006.

QA/QC Procedures: Each project funded under the State Innovation Grant Program is required to develop a Quality Assurance Project Plan (QAPP) that is compliant with EPA guidance. The QAPP is reviewed by the designated QA official from the appropriate EPA Region and OEPI's QA reviewer. States must have an approved QAPP before the beginning of any data collection. OEPI has prepared guidance for state grant recipients on development of performance measures and quality assurance plans. OEPI also requires participation by each new state grant recipient in an annual training workshop that addresses these areas. Additionally, final project reports will be made available to other States and to the public for examination. EPA is also a partner with State Innovation Grant recipients in the conduct of open forums for discussion of projects, such as the ERP All-States Meeting held annually to allow open examination of progress and results in each of the ERP projects.

Data Quality Reviews: N/A.

Data Limitations: Potential sources of error include miscalculations, faulty data collection, misreporting, inconsistent reporting, and nonstandard reporting on the part of the facility. Manually entered data are sometimes typed incorrectly.

Because States are required to submit only synoptic (or meta) data with regard to program performance, we rely on the States to apply the appropriate steps to ensure data accuracy and appropriateness of analysis as described in their QAPP. In 2007, OEPI initiated a post-award monitoring program that will include steps to audit reporting under the State Innovation grant Program.

Error Estimate: Not calculated.

References: Information on the State Innovation Grant Program, including State pre-proposals and final workplans can be found on the program website at: http:/www.epa.gov/innovation/stategrants. OEPI published its first State Innovation Grants Program progress report in early 2008.

GOAL 5 OBJECTIVE 3

FY 2009 Performance Measures:

- **Percent of tribes implementing federal regulatory environmental programs in Indian country. (Strategic Target & PART Measure)**
- **Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country. (Strategic Target & PART Measure)**
- **Percent of tribes with an environmental program. (Strategic Target & PART Measure)**
- **Number of environmental programs implemented in Indian country per million dollars. (PART efficiency Measure)**

Performance Database: EPA's American Indian Environmental Office (AIEO) developed an information technology infrastructure, named the Tribal Program Enterprise Architecture (TPEA). The TPEA is a suite of secure Internet-based applications that track environmental conditions and program implementation in Indian country as well as other AIEO business functions. One TPEA application, the Objective 5.3 Reporting System, tracks progress in achieving the performance targets under Goal 5 Objective 3 of EPA's 2006-2011 Strategic Plan – "Improve Human Health and the Environment in Indian Country." EPA staff use the Objective 5.3 Reporting System to establish program performance commitments for future fiscal years and to record actual program performance for overall national program management. This serves as the performance database for all of the strategic targets, annual performance measures and PART measures.

Data Source: Data for the Objective 5.3 Reporting System are input on an ongoing basis by Regional tribal program project officers, as designated by the Regional Indian Coordinators. The system is password protected; all persons authorized to input data have individual passwords.

The original documents for the statements and data entered into the fields of the Objective 5.3 Reporting System can be found in the files of the Regional Tribal Project Officers overseeing the particular programs that are being reported on. For example, documents that verify water quality monitoring activities by a particular tribe will be found in the files of the Regional Water 106 Project Officer for the tribe.

The performance measure, "Percent of tribes implementing Federal regulatory environmental programs in Indian country" tracks the number of "Treatment in a manner similar to a State" (TAS) program approvals or primacies and execution of "Direct Implementation Tribal Cooperative Agreements (DITCAs)."

The performance measure, "Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country," reports the number of active Quality Assurance Project Plans (QAPPs) for monitoring activities. All ongoing environmental monitoring programs are required to have active QAPPs. Regional tribal program liaisons obtain the information from Regional Quality Assurance Officers and input it into the Objective 5.3 Reporting System,. The data are updated continually and are reported mid-year and at the end of each fiscal year.

The performance measure, "Percent of tribes with an environmental program," counts tribes that have an EPA-funded environmental office and/or coordinator staffed in the most current year and that have at least one of the following indicators:

- completed a Tier III Tribal Environmental Agreement (TEA) that specifies actions by EPA and the Tribe, and includes monitoring, as evidenced by a document signed by the tribal government and EPA;
- established environmental laws, codes, ordinances or regulations as evidenced by a document signed by the tribal government;
- completed solid and/or hazardous waste implementation activities; or

- completed an inter-governmental environmental agreement (e.g. State-Tribal Memorandum of Agreement (MOA), Federal-Tribal MOA).

EPA Regional project officers managing tribes with an environmental program input data, classified by tribe, into the Objective 5.3 Reporting System, to derive a national cumulative total.

The performance measure, "Number of environmental programs implemented in Indian country per million dollars," is calculated annually by summing the number of tribes receiving General Assistance Program (GAP) grants, the number of TAS approvals or primacies, the number of DITCAs, and the number of GAP grants that have provisions for the implementation of solid or hazardous waste programs and dividing that sum by the annual GAP appropriation (less rescissions and annual set-asides).

Methods and Assumptions: The Objective 5.3 Reporting System contains all the information for reporting on AIEO performance measures and PART measures. The information is entered into standard query fields in the data system. Thus, there is no allowance for differences in reporting across EPA's Regional offices, and national reports can be assembled in a common framework. The assumption is the authorized person who enters the data is knowledgeable about the performance status.

Suitability: These measures represent progression toward the goal of improving human health and the environment in Indian country by helping tribes plan, develop and establish environmental protection programs.

QA/QC Procedures: The procedures for collecting and reporting on the Objective 5.3 performance measures require that program managers certify the accuracy of the data submitted by the regions to AIEO. This certification procedure is consistent with EPA Information Quality Guidelines (See http://www.epa.gov/quality/informationguidelines/index.html for more information.)

Data Quality Reviews: The certifying official for the information submitted by EPA's Regional offices to AIEO through the Objective 5.3 Reporting System, is the Regional Administrator. However, in some cases the Regional Administrator may wish to delegate the signatory authority to some other official such as the Regional Indian Coordinator. This procedure generally follows guidance provided in EPA Information Quality Guidelines. (See http://intranet.epa.gov/ocfo/policies/iqg/index.html for more information.)

Data Limitations: Because data are input by EPA's Regional Project Officers on an ongoing basis, there may be a time lag between when a tribal program status has been achieved and when the data are entered into the Objective 5.3 Reporting System. Even though the Regional Project Officer may enter data on an ongoing basis, at the end of the reporting cycle the Objective 5.3 Reporting System will be "locked down," with the locked dataset reported for the fiscal year. EPA's Regional Administrator certifies the accuracy of the locked information.

Error Estimate: For the Objective 5.3 Reporting System, errors could occur by mis-entering data or neglecting to enter data. However, the data from each region will be certified as accurate at the end of each reporting cycle; error is estimated to be low, about 1-2 percent.

New/Improved Data or Systems: The Objective 5.3 Reporting System is a part of the AIEO Tribal Program Enterprise Architecture, and is a part of the same Life Cycle milestones of that system. Present focus is on Operations and Maintenance activities for the Tribal Program Enterprise Architecture beginning in FY08.

References:
Objective 5.3 Reporting System: https://iasint.rtpnc.epa.gov/TATS/tats_prv/entry_page
OCFO Information Quality Guidelines: http://intranet.epa.gov/ocfo/policies/iqg/index.html

ENABLING SUPPORT PROGRAMS

FY 2009 Performance Measure:

- **Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days**.

Performance Database: Data is derived from EZ-Hire, EPA's implementation of Monster Inc.'s Quickhire system used for application development, posting, application submission, and screening. These data is tracked internally and reported on a fiscal year and quarterly basis. The data are reported by the servicing human resources offices and rolled up into Agency-wide averages.

Data Source: The Office of Human Resources (OHR) EZ-Hire System.

Methods, Assumptions and Suitability: Data on new hires are collected by OHR using the EZ-Hire system. OHR uses EZ-Hire to generate a raw data report on a quarterly basis (after the quarter has been completed). The data is downloaded as an Excel spreadsheet and is tracked by vacancy announcement number and formatted into the various components of the Office of Personnel Management's (OPM) 45-day Hiring Model. OHR staff review the results, and identify any anomalies that may need further investigation. The draft report is then sent to the servicing HR Offices so the data can be validated, corrected, and ultimately transferred to the OHR to be finalized. HR Offices also work with the Selecting Officials to develop explanatory justifications for those vacancies which exceeded the 45-day timeframe.

QA/QC Procedures: EZ-Hire tracks vacancy announcement activity from the time the announcement opens until a job offer is made to a candidate by the Selecting Official.

Data Quality Reviews: OHR staff review and analyze the raw data, prior to it being provided to the HR Offices for validation. Local HR Offices review and validate the data, identify anomalies or data-entry errors, make corrections, and provide the updated information to OHR so that the report can be finalized. Questions about the data or resolution of issues of concern are frequently resolved through discussion and consultation with OHR.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: In November 2006, EPA upgraded to the web-based *Hiring Management* version of *Monster Inc.'s Quickhire* hiring management system. This represents a significant milestone building on EPA's early adoption of this system.

References: EZ-Hire

FY 2009 Performance Measure:

- **Average time to hire SES positions from date vacancy closes to date offer is extended, expressed in working days**.

Performance Database: Data is manually maintained by the Executive Resources Staff (ERS) in a Word format. Data is updated thorough-out the various stages of the hiring process.

Data Source: The Office of Human Resources' Executive Resources Staff.

Methods, Assumptions and Suitability: Data from the weekly report is tracked and reported quarterly. ERS staff reviews the results and further investigates any data anomalies prior to finalizing the quarterly report. These data are tracked manually on a weekly basis and reported on a quarterly basis. The data are reported by servicing human resources office and are expressed as an average number of days (where the time to extend an offer for each vacancy is averaged for that servicing HR office.)

QA/QC Procedures: Data are added as vacancy status changes. The weekly report is reviewed by the ERS Team leader. Questions about the data or resolution of issues of concern are frequently resolved through discussion and consultation within the team.

Data Quality Reviews: ERS staff review and analyze the raw data, prior to it being provided to the Team leader for validation. The Team leader reviews the data, identifies anomalies or data-entry errors, and provides the updated information to OHR so that the report can be finalized.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: The current system is sufficient for tracking the SES hiring activities, given the small number of positions filled annually, about 12 per year.

References: Executive Resources Staff

FY 2009 Performance Measure:

- **Agency managers' satisfaction with the initial stages of the human resources hiring process, as measured by the average score across 4 questions (2A through 2D) in the OPM Management Hiring Satisfaction Survey.**

This performance measure examines the selecting official's satisfaction levels in these facets of the vacancy announcement process:

2A- the job summary accurately described the position;
2B - I was involved in the development of the evaluation criteria;
2C - the evaluation criteria encompassed the Knowledge, Skills, Abilities (KSAs) and competencies needed for the job; and,
2D - I received a referral list in a timely manner.

Measured percentage is percent of respondents selecting strongly agree or agree.

Performance Database: Data are derived from OPM's Management Satisfaction Survey which is part of the Government-wide effort to improve the Federal hiring process. OPM releases survey results quarterly based on feedback from selecting officials on questions regarding the Agency's recruitment process. The survey targets satisfaction with the job announcement, resume contents, applicant quality and quantity, and hiring flexibilities available to obtain the candidate of choice. Agencies use the data to identify, develop and implement plans to improve their recruitment efforts.

Data Source: OPM's Management Satisfaction Survey

Methods, Assumptions and Suitability: The survey is web-based and administered by OPM with facilitation by EPA's HR offices. OPM provides the results of the survey once a quarter. Only managers who have made selections for positions are participants in that quarter's survey, and the feedback in the survey is a reflection of that manager's experience in the hiring process.

QA/QC Procedures: EPA uses a certification form signed by the selecting official that verifies that they have taken the survey. That certificate is included in the case file for that vacancy and is included in the document review as part of the Agency's Human Capital Assessment Program. OPM is responsible for compiling the survey results in a quality manner and preparing the Agency's reports. OHR staff review the results, and identify any areas of the hiring process that may need further investigation.

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: OPM's Management Satisfaction Survey

FY 2009 Performance Measure:

- **Maintenance and improvement of Mission Critical Occupation (MCO) employee competencies, as measured by proficiency levels of competencies in MCOs reassessed in FY 2009.**

Performance Database: *Plateau* is a contractor supplied database and assessment tool. The database is populated with competency/skills of selected MCOs that are deemed necessary for successful performance. It includes survey data from employee self-assessments and supervisory assessments on employee competency/skills.

Methods, Assumptions and Suitability: Survey data have been used to assess the competencies of EPA's 6 priority MCOs. Reassessments of the assessed MCOs are repeated and compared to previous assessment baselines.

Data Source: *Plateau* includes survey data from employee self-assessments and supervisory assessments on employee competency/skills.

QA/QC Procedures: The Office of Human Resources will continue to include the supervisory assessment to affirm whether the selected MCO has made progress in developing toward the targeted level of proficiency, identified for successful performance in the necessary competencies.

Data Quality Reviews: N/A

Data Limitations: Employees self-assess their competency/skills which are averaged with supervisor assessments, when available. The reliability of the data is subject to scoring bias as well as over-inflation or under-inflation of self assessments.

Error Estimate: N/A

New/Improved Data or Systems: This is a new competency/skills database.

References: N/A

FY 2009 Performance Measure:

- **Cumulative percentage reduction in energy consumption in EPA's 34 reporting facilities from the FY 2003 baseline**

Performance Database: The Agency's contractor provides energy consumption information quarterly and annually. The Agency keeps the energy consumption data in the "Energy and Water Database," which is a collection of numerous spreadsheets. The contractor is responsible for reviewing and quality assuring/quality checking (QA/QCing) the data.

Data Source: The Agency's contractor requests and collects quarterly energy and water reporting forms, utility invoices, and fuel consumption logs from energy reporters at each of EPA's "reporting" facilities (the facilities for which EPA pays the utility bills directly to the utility company). The reported data are based on metered readings from the laboratory's utility bills for certain utilities (natural gas, electricity, purchased steam, chilled water, high temperature hot water, and potable water) and from on-site consumption logs for other utilities (propane and fuel oil). In instances when data are missing and cannot be retrieved, reported data are based on a proxy or historical average.

Methods, Assumptions, and Suitability: N/A

QA/QC Procedures: EPA's contractor performs an exhaustive review of all invoices and fuel logs to verify that reported consumption and cost data are correct. EPA's Sustainable Facilities Practices Branch compares reported and verified energy use at each reporting facility against previous years' verified data to see if there are any significant and unexplainable increases or decreases in energy consumption and costs.

Data Quality Reviews: N/A

Data Limitations: EPA does not have a formal meter verification program to ensure that an on-site utility meter reading corresponds to the charges included in the utility bill.

New/Improved Data or Systems: N/A

References: N/A

FY 2009 Performance Measures:

- **Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.**
- **Number of states, tribes, and territories that will be able to exchange data with CDX through nodes in real time, using standards and automated data-quality checking.**
- **Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.**

Performance Database: CDX Customer Registration Subsystem.

Data Source: Data are provided by State, private sector, local, and Tribal government CDX users.

Methods, Assumptions, and Suitability: All CDX users must register before they can begin reporting. The records of registration provide an up-to-date, accurate count of users. Users identify themselves with several descriptors and use a number of CDX security mechanisms for ensuring the integrity of individuals' identities.

QA/QC Procedures: QA/QC has been performed in accordance with a CDX Quality Assurance Plan ["Quality Assurance Project Plan for the Central Data Exchange," 10/8/2004] and the CDX Design Document v.3, Appendix K registration procedures [*Central Data Exchange Electronic Reporting Prototype System Requirements*: Version 3; Document number: EP005S3; December 2000]. Specifically, data are reviewed for authenticity and integrity. Automated edit checking routines are performed in accordance with program specifications and the CDX Quality Assurance Plan. This Plan is currently being updated to incorporate new technology and policy requirements and a draft is scheduled to be released at the end of FY 2007 [contact: Sana Hamady, 202-566-1674]. In FY 2008, CDX will develop robust quality criteria, which will include performance metric results, for the upcoming CDX contract recompete scheduled to be awarded in FY 2009.

Data Quality Reviews: CDX completed its last independent security risk assessment in January 2005, and all vulnerabilities are being reviewed or addressed. In addition, routine audits of CDX data collection procedures, statistics 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 a secondary level of analysis that takes time and human resources. In addition, environmental data collected by CDX is delivered to National data systems in the Agency. Upon receipt, the National systems often conduct a more thorough data quality assurance procedure based on more intensive rules that can be continuously changing based on program requirements. As a result, CDX and these National systems appropriately share the responsibility for ensuring environmental data quality.

Error Estimate: CDX incorporates a number of features to reduce errors in registration data and that contribute greatly to the quality of environmental data entering the Agency. These features include pre-populating data either from CDX or National systems, conducting web-form edit checks, implementing XML schemas for basic edit checking and providing extended quality assurance checks for selected Exchange Network Data flows using Schematron. The potential error in registration data, under CDX responsibility has been assessed to be less than 1 %.

New/Improved Performance Data or Systems: CDX assembles the registration/submission requirements of many different data exchanges with EPA and the States, Tribes, local governments and the regulated community into a centralized environment. This system improves performance tracking of external customers and overall management by making those processes more consistent and comprehensive. 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 additional automated quality assurance procedures for the system and reduce human error.

References: CDX website (www.epa.gov/cdx).

FY 2009 Performance Measure:

- **Percent of Federal Information Security Management Act reportable systems that are certified and accredited**

Performance Database: Automated Security Self-Evaluation and Remediation Tracking (ASSERT) database.

Data Source: Information technology (IT) system owners in Agency Program and Regional offices.

Methods, Assumptions, and Suitability: Annual IT security assessments are conducted using the methodology mandated by the Office of Management and Budget (OMB), the National Institute of Standards, and Technology (NIST) Security Self-Assessment Guide for Information Technology Systems. ASSERT has automated and web-enabled this methodology.

QA/QC Procedures: Automated edit checking routines are performed in accordance with ASSERT design specifications to ensure answers to questions in ASSERT are consistent. The Office of Inspector General consistent with §3545 FISMA, and the Chief Information Officer's information security staff conduct independent evaluations of the assessments. The Agency certifies results to OMB in the annual FISMA report.

Data Quality Reviews: Program offices are required to develop security action plans composed of tasks and milestones to address security weaknesses. Program offices self-report progress toward these milestones. EPA's information security staff review these self-reported data, conduct independent validation of a sample, 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.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References:
Annual Information Security Reports to OMB: Annual Information Security Reports to OMB: http://intranet.epa.gov/itsecurity/progreviews/; OMB guidance memorandum: http://www.whitehouse.gov/omb/memoranda/fy2007/m07-19.pdf; ASSERT web site https://cfint.rtpnc.epa.gov/assert/index.cfm; NIST Special Publication 800-53, Recommended Security Controls for Federal Information Systems. February 2005: http://csrc.nist.gov/publications/nistpubs/index.html; and, Federal Information Security Management Act, PL107-347: http://csrc.nist.gov/policies/FISMA_final.pdf

FY 2009 Performance Measures:

- Environmental and business actions taken for improved performance or risk reduction; environmental and business recommendations or risks identified for corrective action; and return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations
- Criminal, civil, administrative, and fraud prevention actions

Performance Database: The OIG Performance Measurement and Results System captures and aggregates information on an array of measures in a logic model format, linking immediate outputs with long-term intermediate outcomes and results. OIG performance measures are designed to demonstrate value added by promoting economy, efficiency and effectiveness; and preventing and detecting fraud, waste, and abuse as described by the Inspector General Act of 1978 (as amended). Because intermediate and long-term results may not be realized for several years, only verifiable results are reported in the year completed. Database measures include numbers of: 1) recommendations for environmental and management improvement; 2) legislative, regulatory policy, directive, or process changes; 3) environmental, program management, security and resource integrity risks identified, reduced, or eliminated; 4) best practices identified and implemented; 5) examples of environmental and management actions taken and improvements made; 6) monetary value of funds questioned, saved, fined, or recovered; 7) criminal, civil, and administrative actions taken, 8) public or congressional inquiries resolved; and 9) certifications, allegations disproved, and cost corrections.

Data Source: Designated OIG staff enter data into the system. Data are from OIG performance evaluations, audits, research, court records, EPA documents, data systems, and reports that track environmental and management actions or improvements made and risks reduced or avoided. OIG also collects independent data from EPA's partners and stakeholders.

Methods, Assumptions, and Suitability: OIG performance results are a chain of linked events, starting with OIG outputs (e.g., recommendations, reports of best practices, and identification of risks). The subsequent actions taken by EPA or its stakeholders/partners, as a result of OIG's outputs, to improve operational efficiency and environmental program delivery are reported as intermediate outcomes. The resulting improvements in operational efficiency, risks reduced/eliminated, and conditions of environmental and human health are reported as outcomes. By using common categories of performance measures, quantitative results can be summed and reported. Each outcome is also qualitatively described, supported, and linked to an OIG product or output. The OIG can only control its outputs and has no authority, beyond its influence, to implement its recommendations that lead to environmental and management outcomes.

QA/QC Procedures: All performance data submitted to the database require at least one verifiable source assuring data accuracy and reliability. Data quality assurance and control are performed as an extension of OIG products and services, subject to rigorous compliance with the Government Auditing Standards of the Comptroller General[15], and regularly reviewed by OIG

[15]Government Auditing Standards (2007 Revision), General Accounting Office, GAO-07-162G, January 2007; Available on the Internet at www.gao.gov/govaud/ybk01.htm, last updated December 2007.

management, an independent OIG Management Assessment Review Team, and external independent peer reviews. Each Assistant Inspector General certifies the completeness and accuracy of performance data.

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 Measurement and Results System. All data reported are audited internally for accuracy and consistency.

Data Limitations: All OIG staff are responsible for data accuracy in their products and services. However, there is a possibility of incomplete, miscoded, or missing data in the system due to human error or time lags. Data supporting achievement of results are often from indirect or external sources, with their own methods or standards for data verification/validation.

Error Estimate: The error rate for outputs is estimated at +/-2%, while the error rate for reported long-term outcomes is presumably greater because of the longer period needed for tracking results and difficulty in verifying a nexus between our work and subsequent actions and impacts beyond our control. Errors tend to be those of omission.

New/Improved Data or Systems: The OIG developed the Performance Measurement and Results System as a prototype in FY 2001 and constantly revises the clarity and quality of the measures as well as system improvements for ease of use. During FY 2007, the OIG implemented an Audit Follow-up Policy to independently verify the status of Agency actions on OIG recommendations, which serve as the basis for OIG intermediate outcome results reported in the OIG Performance Measurement and Results System. The quality of the data will continue to improve as staff gain greater familiarity with the system and measures, and as OIG performs follow-up verification reviews to identify and track actions and impacts. The OIG is also implementing full costing of OIG products to measure relative return on investment from the application of OIG resources.

References: All OIG non-restricted performance results are referenced in the OIG Performance Measurement and Results System with supporting documentation available either through the OIG Web Site or other Agency databases. The OIG Web Site is www.epa.gov/oig.[16]

[16] U.S. EPA, Office of Inspector General, Audits, Evaluations, and Other Publications; Available on the Internet at www.epa.gov/oig , last updated October 2007.